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6 December 1985

# USSR Report

AGRICULTURE



FOREIGN BROADCAST INFORMATION SERVICE

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## USSR REPORT AGRICULTURE

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### KAZAKHSTAN FARM WORKERS MOVE TO ACCELERATE HARVEST OPERATIONS

Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 13 Jun 85 p 1

[Article by Yu. Livinskiy, staff correspondent: "The Grain Field is Testing Us" under the rubric "For Harvest-85"]

[Excerpts] The grain harvest in southern Kazakhstan is in full swing. Harvest work has moved from the steppe to the foothills and has spilled over into mountain fields. Competition has sprung up among the district's machine operators concerning the pace and quality of the harvest and meeting and surpassing the five year plan for grain.

The grain field of Lengerskiy Rayon has a reputation for good harvests. Here in good years about 26 centners of grain per hectare are harvested.

The harvest in the region has not turned out very large. The harsh winter has been the most telling factor. The fact is that under local conditions large harvests are due to winter crops which have an appreciably higher yield here than spring crops. However, at present almost one third of the winter crop has perished; it had to be resown during the cold, drawn out spring. The region's agricultural workers are now harvesting about 17 quintals of grain per hectare. Even with that yield, chances are good not only to meet the year's plan for the sale of grain to the state but to surpass it.

"The grain fields of our rayon are located in the steppe zone and also in the mountain foothills," Raykom First Secretary, S. Tereshchenko explained.

"Taking this into account, we decided to position our machines so as to more quickly complete grain harvest in the plain and then to get right to mowing in the remaining area. For this purpose, some combines in areas where the crop was still ripening were moved, by the authority of RAPO, to the Kazgurtskiy Sovkhoz and the rayon specialized economic association which had the largest area under crops in the steppe zone. As a result, workers there were able to complete the harvest in 12-13 working days, a week earlier than last year. Now, machine operators from these farm units are helping others. Mowing and threshing operations are now going on everywhere at a fast pace. The farm workers of Kolkhoz imeni S. Seyfullin are now bringing in an excellent harvest. At first they harvested the winter barley Zavet on the remote section Kolbastau which produced about 35 quintals to the hectare."

Farm workers of other rayon farms are proceeding with grain mowing at a rapid rate. All of their thoughts and efforts are directed toward one goal: to complete the harvest as quickly as possible and to bring it in without losses.

Not only are mowing and threshing of grain crops proceeding at a fast pace in the rayon, delivery of grain to the state is also. Kolkhoz imeni S. Seyfullin was the first to fulfill its plan for sale of grain to the state. The Kazgurtskiy and Pervomayskiy sovkhoses and Bolshevik and Kommunism kolkhoses are on the verge of fulfilling theirs.

While bringing in this harvest, farm workers are already thinking about the fate of the next one. Plowing rigs are going out right after the combines onto the cleared fields and are turning over the soil around the clock. They are struggling to achieve fast and high quality results. Certainly the growers know based on their experience that early plowing is a good follow-up to the harvest. They are rushing to take care of the full range of field work as quickly as possible.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### DZHAMBUL FARM WORKERS INTENSIFY HARVEST OPERATIONS

Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 2 July 85 p 1

[Article by A. Kozlov, staff correspondent, from Dzhambul Oblast under the rubric "For Harvest-85:" "The Scope of the Harvest is Widening"]

[Excerpts] Farm workers in Dzhambul Oblast have begun the harvesting. Machine operators of the Assinskiy Sovkhoz in Dzhambulskiy Rayon were among the first to bring their combines out into the fields.

The sovkhoz grain fields cover an area of 4,000 hectares. The harvest of barley from unirrigated lands is now in progress. On average their yield is 10 quintals per hectare. All the grain is processed and cleaned in winnowing machines, and only then is it sent to grain receiving stations. Any day now winter wheat from irrigated land will start to arrive. It will produce no less than 40 quintals per hectare. Thus, the Sovkhoz will have bread.

"All 18 kolkhozes and sovkhozes of the rayon are engaged in the harvest," First Secretary of the Dzhambulskiy Party, Raykom T. Musraliyev explained. "Our machine operator's job is to complete the harvest in 12 working days and to thresh 64,000 tons of grain without any losses."

On large tracts of land freed of stubble the sowing of corn for livestock feed is beginning; the corn will occupy about 1,300 hectares. Rayon farm workers are faced with the need to plow still another 27,000 hectares.

Workers are also harvesting crops on the kolkhozes of the neighboring Sverdlovskiy Rayon.

It is also a busy time in the fields of Lugovskiy Rayon, the primary grain producing area in the oblast.

Machine operators of Kolkhoz imeni Zhdanov in Chuyskiy Rayon are threshing 11 quintals per hectare on unirrigated land. Grain from the new harvest has begun to arrive from the Sarybulakskiy Sovkhoz in Kurdayskiy Rayon. In harvesting the first field, operators of this sovkhoz got a yield of 27 quintals per hectare from the field's 300 hectares; they did a good job. Other enterprises of this region have started to make grain deliveries also.

The deputy director of the department of agriculture of the Dzhabul Party, Obkom Yu. Shchukin said, "The farm workers of our oblast are faced with the need to harvest grain from 600,000 hectares, to thresh an average of 15 quintals per hectare, to gather 900,000 tons of grain and to deliver to the state not less than 460 [as written] tons of grain. Everywhere, workers are organizing their work in the most productive way: multi-trailer trucking of grain and two-shift utilization of vehicles. The success of this harvest depends on the proper and highly productive utilization of equipment and intense socialist competition in the sovkhoses and kolkhoses."

Intense harvest work is spreading rapidly. Oblast farm workers are striving to complete their work on time and to gather the harvest of the final year of the 11th Five-Year Plan without any losses.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### NEW THRESHING PROCEDURE CUTS LOSSES

Moscow SELSKAYA ZHIZN in Russian 19 July 85 p 1

[Article by A. Iseyev, SELSKAYA ZHIZN Stringer: "Experiment in Progress"]

[Text] Dzhambul, 19 July--The beetroot sovkhoz and Krasnyy Vostok and Pobeda kolkhozes in Merzenskiy Rayon have adopted stationary grain threshing. The entire cut crop intact with the ears is put into conventional tractor drawn wagons which are used to cart green alfalfa or corn in bulk. The wagons deliver the unthreshed mass to the edge of a field or to a threshing area where the combines that thresh the grain are found.

This new procedure has one main goal: to reduce losses. Calculations show that at the Kolkhoz Krasnyy Vostok the procedure reduced losses to two quintals per hectare. From where it is threshed, the grain is brought to the main threshing area by usual means. Another advantage of the procedure is that both the chaff and ears of grain are moved from the field at the same time. This makes it possible to begin plowing the field right away without delaying the ricking.

Stationary grain threshing is being used in the oblast for the first time on an experimental basis.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

CHAPAYEV KOLKHOZ HAYLAGE PLAN--The Kolkhoz imeni Chapayev, Dzhuzalskiy Rayon, Dzhambul Oblast, has become one of the first to report fulfillment of this year's plan for laying away hay and silage. It is rare now not to hear complaints about the unfavorable weather for agriculture. The long drawn out spring, frost and snow in the middle of May and June heat without any rain all undoubtedly had an effect on the condition of grass in the Talas-Assinskiy oasis. However, at Kolkhoz imeni Chapayev they reasoned with justification that when one cares for grasses properly and does not over simplify or omit sound agricultural methods, the fickleness of the weather produces far fewer disappointments. Haying at Kolkhoz imeni Chapayev is approaching completion. The kolkhoz machine operators have been accumulating supplies of fodder that exceed the plan [By A. Kozlov, staff correspondent] [Text] [Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 14 July 85 p 1] 8750

SHETSKIY RAYON HAYING--Dzhezkazgan--One quarter of the yearly plan for the gathering of fodder was completed during a 10 day large-scale mowing operation in Shetskiy Rayon. Shetskiy Rayon won the oblast socialist competition. It was not easy for the Shetskiy workers to achieve success. Cold, frost and then a sudden hot spell with a shortage of precipitation retarded the growth of the grasses. "We foresaw haying difficulties," RAPO council chairman V. Zhumkin explained, "and, therefore, worked out in advance a green harvest strategy. We went with a group method of operation, concentrated our equipment, and ably maneuvered it so as not to let the hay stand too long." Twenty-seven integrated mechanized teams, transferred to an unregulated system of organization and worker remuneration are now doing haying in a technologically advanced manner. For the spring crop harvest, re-outfitted combines are being utilized everywhere. The laying in of the hay is proceeding without any interruption of operations. (KAZTAG article) [Text] [Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 11 July 85 p 1] 8750

HAYING IN KARAGANDA OBLAST--Farm workers in central Kazakhstan have had to put away fodder for livestock under difficult conditions. The cold, drawn out spring, shortage of precipitation and the subsequent onset of hot weather have had their effect. Grasses are thin and low. It is not even possible to get from an irrigated hectare what was anticipated. Under these conditions every hour is precious during haying operations. Haying operations are beset by many difficulties. Units of the State Committee for Agricultural Equipment poorly repaired the equipment and it has been necessary to put it in working condition

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out in the fields. Many spare parts are in short supply. The situation is difficult. However, the workers laying away the fodder are not thinking of giving up; to put away not less than 767,000 tons of hay and 174,000 tons of silage is for them a matter of honor. [By N. Belov, staff correspondent, from Karaganda Oblast] [Excerpts] [Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 13 July 85 p 1] 8750

CHARDARINSKIY RAYON HARVEST--Chimkent--Chardarinskiy Rayon farm workers shipped 10,000 tons of grain to government granaries yesterday. This is as much as they had been assigned. Their sale of grain is continuing. The harvest of grain has been bountiful in the rayon this year. On average, combine operators have threshed 40-45 centners of grain per hectare. Rayon farm workers are striving to sell to the state this year 110,000 tons of grain, a third more than planned. Rice and corn farm workers, following the example of grain farmers, have also achieved high level output on their land. They completed fertilizing plants and thoroughly watering them at just the right times. All the grain that the rayon is selling to the state from this harvest is grain above and beyond its quota. [Text] [Moscow TRUD in Russian 26 June 85 p 1] 8750

DZHAMBUL OBLAST WHEAT DELIVERIES--Dzhambul, 11 Jul--Koskhozes and sovkhozes in Dzhambul Oblast have begun large grain sales to the state. Many thousands of tons of wheat which farm workers of the Chuyskiy Valley have delivered to the Georgiyevskiy, Moldybayskiy, Berlikskiy and Chaldovarskiy grain receiving enterprises have been rated to be of high quality. Sovkhozes and kolkhozes have received substantial premium for this high quality grain, up to 50 percent over standard procurement prices. [TASS dispatch] [Text] [Moscow SELSKAYA ZHIZN in Russian 12 Jul 85 p 1] 8750

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## LIVESTOCK FEED PROCUREMENT

### LITHUANIAN OFFICIALS DISCUSS FEED PROCUREMENT TASKS, PROBLEMS

Vilnius SOVETSKAYA LITVA In Russian 13 Jun 85 p 1

[Article by ELTA [Lithuanian Telegraph Agency]: "Accelerate Haying, Prepare Only Good Feeds"]

[Text] On 11 June there was a select meeting on questions of feed procurement attended by managers of ministries and departments in the republic's agro-industrial complex and of other responsible workers, rayon leaders and production organizers.

The discussion was conducted by Yu. Bernatavichyus, first deputy chairman of the republic Council of Ministers and chairman of the Commission on Agro-Industrial Questions, Council of Ministers Presidium. M. Grigalyunas, minister of agriculture, and K. Sivitskis spoke about urgent tasks during the present harvest season. I. Leynartas, first secretary of the Kel'meskiy Raykom and Z. Zakarauskas, A. Dachyulis and R. Greychyunas, chiefs of the Skuodasskiy, Anikshchyayskiy and Zarasayskiy Agricultural Administrations, spoke about how to organize haying operations on the spot.

The weather during the first 10 days in June did not create great difficulties for hay-makers. Skillfully organizing work, farmers at many farms achieved fairly good results in feed production. In the opinion of conference participants, haying work was well organized by the initiators of socialist competition in the republic -- farmers from Alitus. The pace was not bad in Lazdiskiy, Kapuskskiy, Kaunasskiy, Ionavskiy, Kayshyadorskiy, Trakayskiy, Shakyayskiy, Shilutskiy, Vilkavishkskiy and Varenskiy rayons. In these rayons grass was cut from about one-third of the hay land and a quite a bit of feed obtained.

However, the situation is not satisfactory everywhere. Since the beginning of the haying season there have been delays and in recent days work has been slow at farms in Akmyanskiy, Anikshchyayskiy, Zarasayskiy, Kelmeskiy, Kretingskiy, Rokishkskiy and Telshyayskiy rayons. Last week only 10-16 percent of the grass stands in these rayons was harvested. Farms in Shirvintskiy and Shyaulyaskiy rayons are lagging even more. This abnormal situation has not arisen because of the weather or equipment shortages. The facts are evidence of something else -- above all, unsatisfactory work organization. Feed procurers do not everywhere work a full day and poorly repaired equipment often breaks down. At

a number of farms some machinery and equipment is still not ready for work. Because of such disruptions, in recent days many grass meal units have stood idle. In some places they are only working one shift. As you know, a large share of grass meal and green chop must be prepared from young, more nourishing grass.

During the first stage of cutting as much high quality grass as possible must be prepared. This is completely possible if tedrakes, active ventilation units, bail pickup trailers and other equipment are used. There are farms which have already put up to a third of their planned feed in their barns. At the same time, haying has only begun in Shilalskiy, Skuodasskiy, Pakruoyskiy and Kupishkiy rayons. As of 10 June none of the 20 farms in Pakruoyskiy Rayon had even begun this work. There are also such farms in other rayons. Delays are especially impermissible where there are poor grass stands. If they are not cut on time the second crop will be of less use.

There are also serious shortcomings in the production of other grass feeds. Some haylage towers have not yet been prepared and there are no plans to fill them at farms in Shyaulyayskiy, Ionishkiy and a number of other rayons. In some places trenches for haylage have not been put in order. Green grass is ensiled without preservatives, although there are enough of them.

Specialists from the Ministry of Agriculture and People's Control organs have discovered several other shortcomings: grass is poorly mowed and some green forage is lost during transportation. These are impermissible losses. In addition, some feed is lost when there are delays in cutting overgrown grass on pastures. In some farms in Shalchininskiy, Mazheykiy, Moletskiy and other rayons there are long delays between grass cutting and processing. This does serious harm to feed quality. A number of farms in Kaunasskiy, Radvilishkiy and other rayons have prepared low quality grass meal.

The seeding of new arable meadows and pastures and the renewal of old ones is not as good as last year. In some places seeds with low germination rates are planted and the varietal mix is not observed. There is another shortcoming -- in some areas seeds are planted in unlevelled and poorly prepared ground. Keep in mind that such pastures will be operated for many years. Land reclamation workers are, above all, guilty of such serious shortcomings.

At the conference it was stressed that haying must be speeded up, especially where it is lagging, good quality feed must be obtained and losses prevented. All cases of waste must be evaluated. Where there are difficulties in the organization of harvest work the necessary patronage support organizations and other assistance must be rapidly enlisted and everything done to complete the first cutting by the end of the month.

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## LIVESTOCK FEED PROCUREMENT

### BELORUSSIAN FEED GRASS HARVEST REVIEW INDICATES DEFICIENCIES

Minsk SELSKAYA GAZETA in Russian 23 Jun 85 p 3

[Article: "Observe Work Schedules -- An Operational Survey"]

[Text] The improvement of natural hayfields and pastures is now one of the most urgent tasks for farmers. It has already been completed in a number of rayons, for example, Maloritskiy, Braginskiy, Smolevichskiy, Starodorozhskiy and Shklovskiy.

However, as operational data show, in Grodny, Vitebsk, Minsk and Gomel oblasts, only 39-47 percent of forage land has been regrassed. In general, work on radical improvements in hayfields and pastures has been left to spontaneous forces at farms in Checherskiy, Tolochinskiy, Yelskiy, Slonimskiy, Volozhinskiy, Iyevskiy and Smorgonskiy rayons.

The Belorussian SSR Minmeliovodkhoz [Ministry of Land Reclamation and Water Resources], Belsel'khozkhimiya [Main Administration for Agrochemical Services] and Glavpolesevodstroy [Main Administration for Water Resources Construction in the Forest Region] are not doing satisfactory work on natural forage lands to prepare areas for grass planting. As of 1 June, Belselkhozkhimiya organizations in Mogilev Oblast had only fulfilled 0.2 percent the grass planting plan, in Grodny Oblast the figure was 2 percent, in Gomel Oblast -- 3 percent, in Vitebsk Oblast -- 6 percent, in Minsk Oblast -- 8 percent and in Brest Oblast 9 percent.

The inventory of hayfields and pastures showed that farms in Mogilev, Minsk and Gomel oblasts have from 14,000 to 17,300 hectares of improved hayfields and pastures which have not been reseeded for more than 5 years and which have extremely low productivity. In spite of this, in a number of places reseeded work is only being done very slowly and at farms in Kirovsk, Berezinskiy, Borisovskiy, Novogrudskiy and Dzerzhinskiy rayons the plans have only been 25 to 27 percent fulfilled. The Kolkhoz imeni Michurin, the Pobda Kolkhoz the Teplivody and Istra sovkhoses and the Mir Sovkhoz-Kombinat in Baranovichskiy Rayon have not even begun improvement work.

A number of farms have not sufficiently organized their work on setting up highly productive grazing land near animal farms and fenced off livestock runs, top dressing them with mineral fertilizers, mowing down weeds and



inedible residues after grazing. Kolkhozes and sovkhoses in Gomel, Mogilev and Brest oblasts have not met their targets. Loyevskiy, Kalinkovichskiy, Rogachevskiy, Svetlogorskiy, Khotimskiy, Chernikovskiy, Mogilevskiy and Gluskiy rayons have only 31-76 percent of their requirements. Pastures allocated for the population's privately owned livestock are in especially bad condition.

Kolkhozes and goskhoses in Gomel Oblast have only fulfilled the plan for fencing off livestock runs by 72 percent, and in Vitebsk Oblast the figure is 89.5 percent.

Special attention should be given to the technology for planting hayfields and pastures. All areas intended for these purposes should be carefully leveled and planned. Sections with a humus layer less than 15 cm thick should not be plowed, but rather worked by nonmoldboard methods: 3-4 diskings by heavy disk harrows or two rototillings. When preparing soddy-podzolic soils for seeding or reseeding, it is mandatory to apply at least 30-40 tons of organic fertilizers and 180 kilograms (active ingredients) of mineral fertilizers per hectare.

Also, the ripening time of grasses should be taken into consideration when planting forage lands. Early ripening grass stands should be planted on 20-25 percent of the area, planting cock's foot on mineral soils and meadow foxtail on drained peat bogs. Middle and late ripening stands should be planted on about 75-80 percent of the area. These should include creeping, hybrid and meadow clovers, meadow fescue, timothy, awnless brome [kostrets], florin, pasture ryegrass and other grass species.

At the same time one should not lose sight of questions concerning forage land upkeep. It is now necessary to apply top dressings of nitrogen fertilizers to all grazed pastures and harvested hayfields. Practice shows that good effects are attained from top dressings of potassium fertilizers. It is therefore necessary to apply them to all forage lands. Every farm should always be removing weeds and inedible plant residues from pastures used for public and private livestock. Progressive farms' experience is instructive in this regard. Pastures are constantly kept in good condition, assuring high milk yields at the Kolkhoz imeni Gastello in Minskiy Rayon, the Progress and Put k Kommunizmu kolkhozes in Grodnenskiy Rayon, the Za Mir in Brestskiy Rayon and the Zarya Kommunizma in Ivanovskiy Rayon and at kolkhozes in many other rayons. Their experience should be utilized by all farms.

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## LIVESTOCK FEED PROCUREMENT

### BELORUSSIAN HAY PROCUREMENT, GRASS MEAL SALE REVIEWED

#### Hay Data Indicates Lag

Minsk SELSKAYA GAZETA in Russian 8 Aug 85 p 1

/Article: "Maintaining the Rates for Feed Procurements"/

/Excerpts/ Task of the day: to activate sharply the mowing of second cutting grasses, to exercise daily control over backward farms, to raise the requirements being imposed upon them and to furnish assistance. All measures are being undertaken to ensure the rapid filling up of the haylage towers and to raise the demands being placed upon the farm leaders with regard to the quality of the forage being procured. Full use must be made of the good days remaining and particularly in connection with accumulating a maximum amount of hay. The plan for procuring this feed must be fulfilled by each kolkhoz, sovkhov and rayon.

The republic's kolkhozes and sovkhovs have all of the opportunities at their disposal for fulfilling the plan for feed procurements. There are now adequate quantities of grass out on the agricultural fields. Clover and alfalfa are in the blossoming phase. Cock's foot, fescue, canary grass and on many areas even timothy are in the panicle heading phase. They are all ready for harvesting.

In those areas where the first cutting was carried out in an organized manner, the mowing of second cuttings of grass is continuing in an active manner and without delay and the plans for accumulating feed are being carried out successfully. More than 8 quintals of feed units per standard head of cattle have already been procured on farms in Luninetskiy, Tolochinskiy, Dobrushskiy, Zhitkovichskiy, Slutskiy, Lyubanskiy, Gluskiy and Kostyukovichskiy rayons.

At the same time, only small amounts of feed have been procured at a number of kolkhozes and sovkhovs. Farms in Ivanovskiy, Beshenkovichskiy, Iyevskiy, Lidskiy and Shchuchinskiy rayons have procured less than 6 quintals of feed units per standard head of cattle. Considerable alarm is being aroused over the fact that less than 4-5 quintals of feed units per standard head of cattle have been accumulated at a large group of kolkhozes and sovkhovs. There are many such farms in Kamenetskiy, Postavskiy, Lelchitskiy, Mozyrskiy, Shchuchinskiy and Klimovichskiy rayons. Correct action is being taken by the leaders in those

rayons where assistance is being furnished at the present time to backward farms in the form of personnel and equipment and haying tracts are being made available to them on other farms.

**Information on Fulfillment of the Plan for Procuring Hay, Haylage and Dehydrated Feed in Accordance With Data Provided by the BSSR CSA on 5 August 1985**

Области  (1)	Всего кормов в кормовых единицах (2) тыс. тонн			На условную голову -- цент без свиней и птицы (6)					к 1984 г. 1985 г.	Сена на корову (общест. сектор) тонн (8)	Остаток за (10) тыс. тонн	
	план (3)	факт (4)	проц. выполнения (5)	план (3)	факт (4)	к плану (5)	в т. ч. для общ. скота (7)				всего кормовых единиц тыс. тонн (9)	(11) сена тыс. тонн
							1984 г.	1985 г.				
Брестская (12)	876	582.6	67	11.3	7.49	-3.81	6.67	6.41	-0.26	1.04	293.4	186.4
Витебская (13)	967	658.2	68	11.7	7.98	-3.72	6.73	6.71	-0.02	1.08	308.8	75.3
Гомельская (14)	1068	752.3	70	12.4	8.72	-3.68	7.16	7.79	+0.63	1.58	315.7	152.4
Гродненская (15)	690	413.2	60	10.8	6.47	-4.33	5.57	5.46	-0.11	1.03	276.8	172.1
Минская (16)	1310	841.1	64	12.5	8.05	-4.45	6.87	7.42	+0.55	1.28	468.9	187.1
Могилевская (17)	847	606.9	72	11.5	8.25	-3.25	5.80	7.51	+1.71	1.42	240.1	82.7
Итого (18)	5758	3854.3	67	11.8	7.89	-3.91	6.53	6.96	+0.43	1.30	1903.7	856.0

**Key:**

- |  |   |
|--|---|
| 1. Oblasts   | 9. Total amount of feed units, in thousands of tons |
| 2. Total amount of feed in feed units (thousands of tons)    | 10. Remaining to be procured                        |
| 3. Plan  | 11. Hay (thousands of tons)                         |
| 4. Fact  | 12. Brest   |
| 5. Percent of fulfillment                                    | 13. Vitebsk   |
| 6. Per standard head -- in quintals (less swine and poultry) | 14. Gomel   |
| 7. Including for public cattle                               | 15. Grodno  |
| 8. Hay per cow (public sector), tons                         | 16. Minsk   |
|  | 17. Mogilev   |
|  | 18. Total   |

However, a check carried out in a number of areas has revealed that unacceptable complacency is being tolerated in some rayons: specialized detachments have ceased their feed procurement operations and labor resources are being utilized in a poor manner. Moreover, the rayon organizations are not providing the backward farms with effective assistance.

Shchuchinskiy Rayon is one of the most backward of the republic's rayons in the procurement of feed. And the chief reason for this -- a lack of organization and the absence of control over this work by the RAPO's /rayon agroindustrial associations/. The Rudkevichi Experimental Base presently has less than 3 quintals of feed units per standard head of cattle. The harvesting of clover is not being carried out despite the fact that it is already ripening. Equipment is lying idle here.

Just as in the past, a careless attitude is being displayed in connection with the procurement of haylage in towers. These facilities are especially empty in Grodno Oblast. The chief reason for this -- the inability on the part of many farm leaders to organize their work properly. There have been many instances of towers not being loaded fully owing to defective equipment.

### Grass Meal Insufficiency

Minsk SELSKAYA GAZETA in Russian 18 Aug 85 p 1

/Article: "Will There Be Sufficient Quantities of Grass Meal?"

/Excerpts/ Growth in the production of livestock products and the successful carrying out of the country's Food Program are promoted by the production of rich and highly nutritious mixed feed. Thus all of the partners in the agroindustrial complex are today displaying concern for the quality of the mixed feed and for increasing the production of such feed.

Gomel Oblast is coping most successfully with fulfilling the plan for selling grass meal to the mixed feed industry. Here the farms are close to completing this plan, with the exception of Mozyrskiy and Rogachevskiy rayons, where the plan has been fulfilled by only 52-45 percent.

The farms in Minsk Oblast on the whole have introduced considerable corrections into the plan for selling grass meal to the state. The procurement rates in Brest Oblast are higher than those for last year. And yet the farms in Vitebsk Oblast have been operating below their potential for a year now. Here the plan for delivering grass meal to the state was fulfilled by only two thirds. Grodno Oblast lost some ground this year; its fulfillment of the plan for selling grass meal was 2.2 percent lower than the level for last year.

Ivyeyskiy Rayon also fell back somewhat. The sales plan called for a total of 400 tons and yet only 70 tons were sold. Today it should be understood that a shortfall in the production of high quality mixed feed is not simply a minus in a summary. Today it constitutes a minus in the work being performed by all those who are specifically and directly responsible for organizing the work: the leaders of farms and procurement organizations.

Some of them are not employing the proper measures against the leaders of farms where a weakening has occurred in discipline and in responsibility for carrying out the state plans and contractual obligations. This applies first of all to the Slonimskiy Sovkhoz and the Kolkhoz imeni Yanki Kupaly in Slonimskiy Rayon, to the Svetlyy Put Kolkhoz in Smorgonskiy Rayon and to the entire Kletskiy Rayon. The fact that the farms in this rayon sold only 440 tons despite the fact that the summaries indicated that 1,000 tons had been produced can only be viewed as disregard of the plan. The Oktyabr and Progress kolkhozes clearly had no intention of fulfilling the state plan. Meanwhile, the neighboring Kolylskiy Rayon has already sold 3.5 times more of this type of product to the state.

There are also some quite surprising examples. The Pobeda and Zarya kolkhozes in Shklovskiy Rayon are specialized farms for the production of grass meal. Their sales plans were 150 and 130 tons respectively. The farms concluded a contractual agreement with the Shklov Mixed Feed Plant and in accordance with the established system received 37 and 32 tons of mixed feed respectively in the form of an advance. Subsequently the farms forgot about their feed meal sales. As yet, not one ton has been delivered.

Powerful units for the preparation of grass meal are lying inactive at the Svetlyy Put Kolkhoz in Smorgonskiy Rayon and also on other farms here equipped with AVM's /forced ventilation machines/. As a result, the rayon as a whole fulfilled its plan for the sale of feed meal by less than 30 percent.

**Information on the Sale of Grass Meal by the Republic's Kolkhozes  
and Sovkhozes as of 16 August 1985**

Области (1)	Продано госу- дарству трава- ной муки в проц. к плану (2)	В том числе по классам: (в проц. к заготовленной) (3)		
		(4) I класс	(5) II класс	(6) III класс
Брестская (7)	72,6	18,3	39,4	42,3
Витебская (8)	64,4	11,4	41,9	46,7
Гомельская (9)	93,4	22,9	77,1	—
Гродненская (10)	73,1	42,9	36,8	20,3
Минская (11)	80,1	13,5	43,5	43,0
Могилевская (12)	73,1	15,7	25,5	58,8

Key:

- |   |             |
|---|-------------|
| 1. Oblasts  | 6. 3d class |
| 2. Grass meal sold to the state in percentage of the plan       | 7. Brest    |
| 3. Including by classes: (in percentage of the amount procured) | 8. Vitebsk  |
| 4. 1st class  | 9. Gomel    |
| 5. 2d class   | 10. Grodno  |
|   | 11. Minsk   |
|   | 12. Mogilev |

Low quality grass meal is coming from a number of kolkhozes and sovkhozes. In particular, this concerns the farms of Vitebsk, Minsk and Mogilev oblasts where, respectively, only 11.4, 13.5 and 15.7 percent of grass meal procured was of top quality. At the same times in Grodnensk Oblast this index is 2.7 times higher, i.e. 42.9 percent. And the farms of Gomelsk Oblast deliver only produce of the first and second quality classes.

Somewhat alarming is the fact that as the amount of grass meal being obtained increases, the quality indicators for it tend to deteriorate. During 2 months of procurements, the percentage of 1st class material decreased on the whole for the republic from 35 to 20.5 percent, that is, by a factor of 1.7. This situation is very alarming. The kolkhozes and sovkhozes are encountering considerable financial and material expenses as a result of having to use low quality raw materials for the production of mixed feed.

Complaints have been received from the farms regarding unsatisfactory work by individual grain receiving and processing enterprises. In particular, many complaints have been received regarding the return to the farms of paper bags for the Miory Mixed Feed Plant.

The situation must be corrected on an urgent basis if sufficient amounts of high quality mixed feed are to be made available for livestock husbandry. The task of the state inspections for procurements and the quality of agricultural products and the grain receiving and processing enterprises, jointly with the

RAPO's, kolkhozes and sovkhoses and other partners in the agroindustrial complex consists of undertaking immediate measures aimed at radically improving organization for the production and procurements of grass meal, raising the quality and carrying out unconditionally the state plans for grass meal deliveries to the mixed feed industry.

7026

CSO: 1824/550



## LIVESTOCK FEED PROCUREMENT

### KAZAKH FEED PROCUREMENT FIGURES REVIEWED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 4 Sep 85 p 2

Agricultural review: "Daily Attention for the Feed"

Text In 1985 the republic's sovkhoses and kolkhozes must procure almost 16.6 million tons of hay and 323,000 tons of vitamin-grass meal and lay in more than 3.3 million tons of haylage and 24.7 million tons of silage. The plan called for a total of 15 million tons of feed units to be accumulated for the winter in the form of coarse and succulent feed -- 16.4 quintals per standard head (not counting hogs and poultry).

According to data supplied by the TsSU [Central Statistical Administration] for the Kazakh SSR, more than 13.5 million tons of hay or 82 percent of the plan had been procured throughout the republic by 2 September, haylage -- more than 4.7 million tons or 142 percent and vitamin-grass meal -- 237,000 tons or 73 percent of the plan. The laying in of silage and the gathering up of straw have commenced. In a conversion for feed units, 8.0 million tons or 8.7 quintals per standard head have been placed in storage. This is more than one half of the volume called for in the plan.

For the republic as a whole, more hay, haylage and vitamin-grass meal have been procured than was obtained by this same date last year.

The situation as of 2 September of this year, with regard to the procurements of coarse and succulent feed in the republic's oblasts, is shown in the table on the following page.

The feed procurement specialists in Kustanay, North Kazakhstan, Mangyshlak and Tselinograd oblasts are accumulating hay and haylage in excess of the plan. All oblasts, with the exception of Aktyubinsk, Alma-Ata, Guryev, Dzhezkazgan, Kzyl-Orda, Semipalatinsk and Ural oblasts, have coped with their plans for laying in haylage and the farms in Kustanay and East Kazakhstan oblasts -- the plans for vitamin-grass meal.

However, the sovkhoses and kolkhozes in Dzhezkazgan, Guryev and Aktyubinsk oblasts are only slowly accumulating their coarse feed, they fulfilled their plan for hay by 54-66 percent and they have fallen behind in haylage and grass meal. In these and also in Kzyl-Orda and Alma-Ata oblasts, considerable areas planned for the procurement of these types of feed have still not been cut down.



Наименование областей (1)	Заготовлено кормов в кормовых единицах (2) тыс. тонн, на 1 усл. голову в центнерах				1984 г.
	(3)	(4)	(3)	(4)	
	план	факт.	план	факт.	
Актыубинская (5)	818	402	13,2	6,5	6,9
Алма-Атинская (6) (7)	868	527	14,3	8,7	7,5
Восточно-Казахстанская	741	398	13,9	7,5	7,9
Гурьевская (8)	245	125	10,0	5,4	6,3
Джамбулская (9)	658	467	13,0	9,2	9,8
Джезказганская (10)	346	167	12,9	6,2	10,5
Карагандинская (11)	602	373	18,9	10,4	12,5
Кзыл-Ординская (12)	403	167	13,3	5,5	8,2
Кокчетавская (13)	1179	481	23,6	9,6	8,4
Кустанайская (14)	1729	745	20,8	9,0	5,7
Мангышлакская (15)	31	23	29,5	2,3	1,8
Павлодарская (16) (17)	1117	565	19,1	9,7	9,2
Северо-Казахстанская	1018	440	22,1	9,5	6,0
Семипалатинская (18)	1101	710	14,7	9,5	10,6
Талды-Курганская (19)	678	498	12,3	9,1	7,8
Тургайская (20)	627	312	22,2	11,1	11,2
Уральская (21)	945	460	14,6	7,1	6,8
Целиноградская (22)	1187	550	20,5	10,2	9,4
Чимкентская (23)	791	590	14,6	10,9	10,4
Всего (24) по республике	15084	8002,5	16,4	8,7	8,3

Key:

- |  |                        |
|--|------------------------|
| 1. Oblast  | 12. Kzyl-Orda          |
| 2. Feed procured in feed units,<br>thousands of tons, per standard<br>head in quintals | 13. Kokchetav          |
| 3. Plan  | 14. Kustanay           |
| 4. Actual  | 15. Mangyshlak         |
| 5. Aktyubinsk  | 16. Pavlodar           |
| 6. Alma-Ata  | 17. North Kazakhstan   |
| 7. East Kazakhstan   | 18. Semipalatinsk      |
| 8. Guryev  | 19. Taldy-Kurgan       |
| 9. Dzhambul  | 20. Turgay             |
| 10. Dzhezkazgan  | 21. Ural               |
| 11. Karaganda  | 22. Tselinograd        |
|  | 23. Chimkent           |
|  | 24. Total for republic |

At the present time, with the grain harvest unfolding along a broad front throughout the republic, considerable importance is being attached to ensuring that the leaders and specialists of farms and agroindustrial associations maintain the same attitude towards the feed as they did towards the grain. Some concern is being aroused over the fact that a reduction in the work rates is taking place in a number of areas. Thus, during the week under review, grass was cut down on 227,000 less hectares than during the previous week, hay procurements -- 156,000 tons less and haylage -- 298,000 tons less.

The production volumes for all types of feed should be defined more precisely at each sovkhos and kolkhoz and a determination should be made as to how realistic these volumes are in light of the existing conditions and how the requirements of public livestock husbandry and the livestock maintained by the population on a private basis will be met.

The Central Committee of the Communist Party of Kazakhstan and the republic's Council of Ministers have provided the oblasts with specific tasks for accumulating feed in a volume of more than 16.7 million tons of feed units, or an average of 18 quintals per standard head. In the process and taking into account the available potential, the plans call for up to 25-28 quintals of feed units to be obtained per standard head in the northern oblasts.

In order for the established task to be carried out on each farm, daily and weekly tasks must be given to special feed procurement brigades and teams created earlier in the interest of ensuring highly productive use of the haying units and transport equipment. The mowing of grasses on unsuitable lands can be increased by enlisting for this work supportive enterprises and the population of cities and rayon centers.

Importance is being attached in all areas to ensuring that everything that is grown on the feed fields and natural lands is harvested completely. All of the straw, glume, vegetable waste scraps and potato haulm must be gathered up and protected. Improvements must be carried out in the harvesting and use of the secondary products of the food and meat and dairy industry and also the waste scraps of public catering enterprises.

Special attention must be given to the quality of the feed and to preserving fully its nutritional value. Progressive technologies and the pressing and forced ventilation of hay must be introduced into operations on an extensive scale.

The time is at hand for the mass laying in of silage -- the chief feed, constituting the main portion of the winter rations for the livestock. This is why the success of the wintering program and the productivity of the animals during the indoor maintenance period are dependent upon how well the farms cope with their silage production plans and upon how well the feed qualities of the procured bulk are preserved.

A rich yield of silage crops has been cultivated in almost all regions of the republic. The chief concern at the present time is that of carrying out the harvest work in an organized manner and as rapidly as possible so as to obtain silage with a high content of dry substance. In order to improve the nutritional value and preservation of the feed, extensive use should be made of different preservatives and bacterial yeasts when placing it in storage and concern should be displayed for ensuring that succulent feed is placed in lined trenches. Experience has shown that a high return is realized from mixed silage, especially for the fattening of hogs and cattle.

Every attempt should be made in each feed procurement collective to achieve efficient control over and to stimulate the quality of the feed, an effective socialist competition and the creation of the conditions required for highly productive labor. The repair and preparation of feed preparation shops and livestock husbandry facilities for winter operating conditions requires a great amount of attention on the part of workers attached to the agroindustrial complex. Special importance is attached to ensuring that the feed on each farm is issued only in a prepared and processed form.

In view of the great tasks to be carried out in livestock husbandry during the final year of the five-year plan, the party committees and the soviet and economic organs in the various areas must ensure the creation on each farm of adequate supplies of high quality coarse and succulent feed. Special control must be exercised over the work of backward rayons and farms having low feed supplies and, when necessary, a redistribution of land should be carried out. An important sector of agricultural production is that of raising the requirements being imposed upon leaders and specialists with regard to the status of affairs in feed procurement work.

7026

CSO: 1824/23

## LIVESTOCK FEED PROCUREMENT

### REGIONAL FEED PROCUREMENT PROGRESS, TASKS NOTED

Moscow SELSKAYA ZHIZN in Russian 6 Sep 85 p 1

[Article: "Decisive Feed Procurement Days"]

[Text] Recently rural workers in Mordovia, taking the favorable situation in fields into consideration, have decided to significantly increase feed procurements as compared to previously projected volumes. The task set is not a simple one: To stock, in addition to the plan, so much feed as to have no less than 2 tons of hay, 3 tons of haylage, 7 or 8 tons of silage and 5 or 6 tons of root crops per cow. This is a farsighted and correct decision. After all, for a stable development of animal husbandry it is necessary not merely to fulfill the feed accumulation plan, but to create a reliable feed reserve guaranteeing an increase in milk yields and weight gains and the procurement of the projected quantity of farm output.

This is especially important, because on many kolkhozes and sovkhozes fodder procurement plans often are not designed to increase farm productivity. On the average, in 1981-1984 assignments for the procurement of coarse and succulent feed were fulfilled 93 percent, but there were only 14 or 15 quintals of feed units per head of livestock--almost one-half of the minimal zootechnical norms. There are still farm managers, who count on receiving concentrates from state bins, not on fully providing the public herd with self-produced feed.

Now, during the last months of the 11th Five-Year Plan, the work of feed procurement officials determines to a decisive degree both the fate of annual plans in animal husbandry and the rates of development of this sector during the first year of the following 5-year period. Whether farm workers can attain a fundamental change in the sector's development depends on the quantity and quality of presently created fodder reserves. This imposes a special responsibility on those now working in the country's fodder field.

Farmers, machine operators and workers of industrial enterprises coming to their aid understand well the extent of this responsibility and try to provide farms with sufficient high-quality feed and to create all the conditions for a successful wintering of livestock. Farms in Azerbaijan fulfilled the plans for the accumulation of coarse and succulent feed more than 80 percent, in Lithuania, where more than 14 quintals of feed units per standard head of

livestock were procured, 92 percent and in Tajikistan and Estonia, 76 or 77 percent. Farms in Vologda, Vladimir, Kaluga, Kostroma and Yaroslavl oblasts in the RSFSR and Kustanay, North Kazakhstan and Tselinograd oblasts in Kazakhstan are close to the fulfillment of feed procurement plans. At the same time, many kolkhozes and sovkhoses in Sverdlovsk, Omsk and Kurgan oblasts stocked less than one-half of the necessary quantity of fodder.

The matter must be rectified urgently. The possibilities for this exist. In many places in the last few weeks the weather has been favorable to the growth of aftercrops, development of stubble-sown crops and procurement of feed. The laying in of the main succulent feed, that is, silage, which forms the basis for winter rations in most places, is in full swing. This work is proceeding at high rates in the Baltic republics and in Ivanovo, Kirov and Sakhalin oblasts. Trenches in the Ukraine and the North Caucasus are being filled with bulk corn. The task is not merely to stock as much succulent feed as possible, but to prepare more nutritious silage with a high content of the dry substance.

The growing of early and middle ripening corn hybrids makes it possible to obtain ears in milky-waxy and even waxy ripeness in most oblasts in the non-chernozem zone of the RSFSR, Belorussia, Kazakhstan and the Baltic republics. As the experience of advanced farms has shown, silage obtained from whole plants with ears and, especially, the grain stem mass, are so nutritious that they make it possible to fatten livestock and to obtain high milk yields without expenditures of concentrates.

The energy-saving technology of preserving and storing ground corn grain of an increased moisture in trenches should find extensive application during the current year. This method has been tested on kolkhozes and sovkhoses in Dnepropetrovsk, Kirovograd, Rostov, Kharkov and Kherson oblasts. Good results have been obtained everywhere. Losses of nutrients are decreasing, their total output is increasing by no less than 30 percent and a great deal of fuel and resources are being saved. It is important to more rapidly prepare airtight storage facilities, to stock up with film and preservatives, to train people in work and to put equipment in order. New technology needs highly productive crushers. In many oblasts they are manufactured at local industrial enterprises and at shops of the State Committee for Supply of Production Equipment for Agriculture. Enterprises of the Ministry of Machine Building for Animal Husbandry and Fodder Production should supply kolkhozes and sovkhoses with such necessary machines. Meanwhile, they remain in debt to feed procurement officials.

The season of the mass procurement of mixed silage, which makes it possible to also introduce succulent feed into the rations of hogs, thus saving a large quantity of grain, is approaching. During the current year its procurements are increasing, as compared to the last year's level, by a minimum of 2.5 million tons. Mixed silage is being skillfully prepared on many farms in Belorussia, the Ukraine and the Central Chernozem Region of the RSFSR. Advanced technology must be also more boldly extended to the country's other zones. Raw materials for the laying in of mixed silage--potatoes, root crops, melon crops, leguminous grass, flax and clover chaff, vegetable growing waste and other feed rich in protein--are available in any region.

Increasing the rates of work at silage trenches in every possible way, we must not forget other sources of replenishment of fodder stocks. This still happens. An anxious letter to the editor was received from Michurinskiy Rayon in Rambov Oblast. Barley straw--feed not inferior to hay in quality--is being burned in fields of local farms. A big gap between the threshing and collection of straw has been formed in Ulyanovsk and Chelyabinsk oblasts.

To utilize all sources and reserves for the replenishment of fodder stocks and to create a reliable carry-over feed reserve at every farm and complex--this is the most important task of rural workers.

11439

CSO: 1824/576



## LIVESTOCK FEED PROCUREMENT

### GLINKA REVIEWS FEED PROCUREMENT PROGRESS

Moscow SELSKAYA ZHIZN in Russian 11 Oct 85 p 2

[Article by livestock specialist M. Glinka: "Feed Procurement Workers Tally Results"]

[Text] Agricultural Review

Kolkhozes, sovkhozes, and interfarm enterprises of the country are completing the procurement of feeds. They have laid in 128.2 million tons of feed units of coarse and succulent feeds--93 percent of what was planned. The storing of silage is continuing, along with the harvesting of food routes, and the transport of coarse feeds to cattle wintering sites.

Before me are readers' letters, the materials of our correspondence, reports from statistical offices, and oblast and republic newspapers--everything which has made it possible to continuously report in the pages of SELSKAYA ZHIZN on the progress of procuring feeds in the country, the successes and failures of farmers, haymaking problems and ways of resolving them--in short, everything which in one way or another has worked to add to the fodder stores of livestock breeding and create the foundations for intensifying farms. Feed procurement is still going on, vehicles with vegetable root crops and silage are still going to warehouses, underground bins of root forage and grain forage warehouses are being filled, and grass meal units are continuing work. And all of this, as they say, is just the "tail." The main work has been done: farms and complexes have the necessary reserve--fodder in more than 128 million tons of feed units--10 percent higher than last year and substantially higher than the level of 1983, which was itself a banner year for fodder.

Although it is early to slack off--we still have to put in storage everything which has been grown for fodder on the field and meadow--it is possible to glance back at the path we have traveled, to analyze what has been done and what was not achieved, to take stock of mistakes and plan new tasks.

So what did the feed harvest of 1985 show? Above all, the vast and by no means fully exploited possibilities of feed production. Consider this figure: the farms of Kazakhstan were able to increase feed procurement by almost 25

percent compared to last year! The feed procurement workers, who were so recently chronic laggards in providing fodder for the social harvest, outstripped all union republics except Lithuania and Moldavia. This means that there is great hope and a reliable foundation for livestock raising in Kazakhstan to become highly productive. Individual feed supplying (calculated per head of cattle) increased by 20-23 percent on farms of Uzbekistan and Kirghizia and 14-16 percent in the Ukraine, Moldavia, Armenia, and Estonia. And this was in a difficult, contradictory, even, if you will, treacherous year, when to get even a decent crop it was necessary not only to work well and thoroughly, but to labor creatively, with the full strength of both the hands and mind.

That was just the way farmers labored in very different ends of our vast country. Perhaps not everyone is surprised by the six crops of alfalfa taken by leading farms in Uzbekistan. But the three harvests of perennial grasses obtained under the inadequate heat conditions of Buryat ASSR are sure to interest many people. Or take the initiative of leading farms of Mordoviya, and farmers of Agdamskiy, Neftechalinskiy, and Imishlinskiy rayons in Azerbaijan, who resolved to significantly overfulfill targets for procuring all types of fodder, in order to lay in at least 30-35 quintals of feed units calculated per head of cattle. These obligations were undertaken not during the time of blossoming of the grasses, but at the end of the year, when the consequences of prolonged rains and cold were already visible, the sun had already scorched the meadows, and it was clear that each additional ton of haylage or silage, hay or grass meal would take a great deal of effort.

Every one of the millions of hectares of fodder, without exaggeration, came hard for the farmers. And here the creative savvy of rationalizers and seasoned skill of agricultural engineers came to their aid. Never before had so many valuable innovations been seen, proving their vitality and indispensability on the job. There was literally no a single technological operation which did not require the serious input of kolkhoz and sovkhoz skilled craftsmen. A method of drying grasses under a synthetic film, developed in Tsesisskiy Rayon in Latvia, got the green light in all regions of the country. In Saratov Oblast this was done using channels under the haystacks fitted out with heating elements, which made it possible to markedly reduce the expenditure of electricity. And in Ulyanovsk Oblast an entire shop for artificially drying hay was constructed out of large-diameter tubes and reconstructed feed dispensers.

For drying out and turning over swaths in the field, Voroninskiy Sovkhoz in Kaluga used an OVT-1 power aggregate for spraying herbicides, the Kormovik Sovkhoz in Orenburg used the same unit, and a number of farms in Altay used the ON-400 mounted sprayer. Interesting novelties also appeared in the laying in of silage. One such was the hoister-tipper, which made it possible for machine operators in the Progress Feeding Complex in Krasnodar Kray to unload the mass of silage from the tractor and trailer in less than a minute without uncoupling it. Also the heavy-freight dumping trailers constructed in Kolkhoz imeni 50-Letiya USSR in Dubovskiy Rayon in Volgograd Oblast. And the original device for injecting chemical preservatives into green mass directly in truck beds--such devices have been operating successfully in the Lindovskoye Broiler Association in Gorkiy Oblast.

However, the farms of Kazakhstan could hardly have made such a sharp spurt in procuring haylage (their stores are almost 1.5 times greater than last year's) if thousands of pneumatic collectors had not been used--hay-harvesting machines based grain combines. The Chita "Uragans" and Kaluga "Kaluzhanetses," rotor tedders manufactured in many oblasts in enterprises of Selkhoztekhnika proved themselves to be just as good. But here is what is striking in all this: it's not because life is good that rural machine operators have taken on a job to which they are, in general, unaccustomed--creating new equipment. The absence of the necessary machines or the low quality of those which are manufactured is the chief motivation of this creativity, taking up time and effort, often leading to nonrational use of equipment going to the countryside. Let us recall that there are not dozens and hundreds but thousands of pneumatic collectors in Kazakhstan: it would be interesting to know where local farms found so many of these junked grain combines, which, as they say, they turned into such truly first-class machines. And who is making good the expenses required to reequip the Niva combines for harvesting grain corn--in Saratov Oblast alone, a thousand of these units were in operation?! It is good that Kursk and Belgorod enterprises have organized the manufacture of main units for producing grain stem mass, but it would have been better to organize their manufacture in plants of the Ministry of Machine Building for Animal Husbandry and Fodder Procurement. Things have come to such a pass that in Primorsko-Akhtarskiy Rayon in Krasnodar Kray the equipment used to prepare this feed is...stone-crushers. The kray discusses in all seriousness the question of creating a special plant for producing machines proposed by rationalizers. Hardly the best way out of the situation.

But what can you do, if the machine builders do not have anything better to suggest? Not long ago the USSR State Committee for Agricultural Technology organized an exhibit of technology in the Moscow region--both standard machines and promising models which are undergoing testing. We saw a long row of units manufactured in shops of the State Committee for Agricultural Technology, and almost no innovations by machine builders.

The whole progress of feed procurement shows that highly effective use of feed procurement technology and properly organized labor of machine operators are making it possible to increase the power of a fodder hectare, resolve the problem of accumulating the necessary quantity of good feeds, and lay the groundwork for guaranteeing the development of livestock raising without dropoffs.

12255

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## LIVESTOCK

### ARTICLE ON MILK PROTEIN SYNTHESIS PROBLEMS DRAWS RESPONSE

Minsk SELSKAYA GAZETA in Russian 27 Aug 85 p 2

[Article: "Barriers in the Path of the Microbiologists"; the article referred to below was published in USSR REPORT: AGRICULTURE UAG-85-010 19 Apr 85, p 11]

[Text] "They Answer SELSKAYA GAZETA." Such was the title of an article published in SELSKAYA GAZETA (No 36, 1985) which examined the problems of introducing to production the developments of Belorussian microbiologists.

In his response to the editorial board, the deputy minister of the USSR Meat and Dairy Industry, V. Segeyev, said that his ministry examined the critical observations made in regard to introducing the developments of the Belorussian Academy of Sciences Institute of Microbiology and the Belorussian branch of the All-Union Scientific Research Institute of the Dairy Industry (VNIMI) on microbe synthesis of protein from whey.

Currently, while molding the "Basic Trends for Economic and Social Development for the 12th Five-Year Plan," the ministry is examining measures to introduce biotechnology and new technological processes in the processing of whey.

The editorial board will provide additional information on the final resolution of the stated problems.

Deputy Minister of the Belorussian SSR Meat and Dairy Industry V. Strelchenko informed the editorial board after the publication of the newspaper.

With the aim of approval and experimental-industrial acceptance of products from biosynthesis, an experimental shop was introduced at the Volozhinskiy Butter and Cheese Plant based on developments from the Belorussian SSR Academy of Sciences Institute of Microbiology and the Belorussian branch of the All-Union Scientific Research Institute of the Dairy Industry. Experimental production was conducted here and the technological production processes for "bio-ZTsM," "promiksa" and "provilakta" were refined.

Analysis of the production and the application of such products showed the advisability for further dairy industry production of "provilakta" in dry

form, and "promiksa" for agricultural production in liquid form to be used on agricultural complexes.

In order to build a shop for the production of "promiksa" at the interkolkhoz enterprise for the production of pork at the Baranovichskiy Rayon Planning and Design Buro and the Minsk pilot-production plant Myasomolmash of the Belorussian SSR Ministry of the Meat and Dairy Industry, planning and design documentation was developed and production equipment was readied and put in place. The Belorussian SSR Ministry of the Meat and Dairy Industry is helping to equip this installation.

Due to delays by the Belorussian SSR Ministry of Agriculture, the construction of the facility, testing and introduction are planned for 1985.

In connection with the fact that the USSR Ministry of the Meat and Dairy Industry has not authorized alterations to an earlier approved project for construction of the Khoyniki Cheese Combine, agreed to with contracting organizations, the building of the shop to produce "provilakta" is being realized after operational start up of cheese-making production and a capacity to dry whey.

At present the Belorussian branch of the Gipromyaso Planning Institute is developing a plan to locate a shop for the production of "provilakta" at the Khoyniki Cheese Combine. The project is to be ready in the third quarter of 1985. In 1985 experimental equipment will be manufactured and installation of production equipment begun.

Practical experience in the production of "bio-ZTsM" on currently available industrial equipment has shown that the drying units do not work satisfactorily. With the aim of improving the drying of biosynthesis products at the Volozhinsky Experimental Butter and Cheese Plant, plans call for joint research to be carried out with the Institute of Heat and Mass Exchange of the Belorussian SSR Academy of Sciences on drying "bio-ZTsM" by the component displacement method.

The article was also investigated at the Belorussian Association of Interkolkhoz Construction Organizations, "Belmezhkolkhozstroy." The deputy chairman of the board of Belmezhkolkhozstroy, L. Zhigunovskiy, stated that the construction of the shop for "promiksa" at the Novyy Put Kolkhoz in Baranovichskiy Rayon with the remaining 214,000 rubles for the budgeted limit for construction-installation work has been included in the contracting work program of the Brest oblast interkolkhoz construction organization for this year. Plans call for the work section to begin operating in the fourth quarter of 1985.

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LIVESTOCK

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NEED TO INCREASE MILK PRODUCTION IN RSFSR CENTRAL ECONOMIC REGION

Moscow ZHIVOTNOVODSTVO in Russian No 9, Sep 85 pp 15-18

[Article by A. P. Soldatov, corresponding member of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], and M. S. Kutuzova, candidate of agricultural sciences: "The Economy of Dairy Farming"]

[Text] In the RSFSR Central Economic Region gross milk production is increasing from year to year. Nevertheless, the population's demand for milk and dairy products in this densely populated industrial region of the country is not being fully satisfied by means of intraregional production. For this reason, it is essential to seek out reserves for increasing volume and for raising the quality and economic effectiveness of the production of dairy products.

Dairy farming is the most labor-intensive branch of livestock raising; 45 percent of total labor expenditures involve dairy farming.

There has been a tendency for the labor intensity needed to produce 1 quintal of milk in the Central Economic Region to decrease--in the period since 1965 labor expenditures for the production of 1 quintal of milk decreased by half in kolkhozes, and in sovkhoses--by a factor of 1.4.

Indicators of labor productivity on dairy farms depend on many production factors--technical, technological, organizational and social.

A regression equation has been developed to determine the degree to which factors affect the level of labor productivity. The use of the stepwise regression method when solving equations has enabled us to establish that the level of productivity of cows (coefficient of determination D equals 74 percent) and the level of overall mechanization (D=19 percent) had the greatest effect on the labor intensity required to produce 1 quintal of milk. Calculations have shown that when the productivity of cows is 3,000-3,500 kilograms as compared to 2,000 kilograms, manpower expenditures are smaller by a factor of 2-2.5.

The level of overall mechanization of production processes on the dairy farms of this economic region comprises only 38 percent due to the low level of mechanization of feed distribution. Meanwhile, it should be noted that the

mechanization of individual production processes, while making the work of livestock farmers easier, does not result in a significant decrease in labor expenditures. Only the overall mechanization of the processes of feed distribution, water supply and manure removal creates the possibility of economizing on labor in livestock raising, which is very important under conditions of a manpower shortage. Increasing the level of overall mechanization by 1 percent provides the basis for decreasing labor expenditures for servicing a head of cattle by 1.6 hours (R is less than or equal to 0.05).

The indicators for labor intensity of milk production in the breeding plant of Kolkhoz imeni Lenin of Tula Oblast--1.5 hours per quintal of milk--serves as a good example of the effectiveness of 100-percent mechanization of production processes and of a high level of productivity in cows (over 4,700 kilograms of milk per cow annually during the 10th Five-Year Plan).

An identification and analysis of the developmental tendencies in dairy farming in the Central Economic Region from 1965 to the present revealed the predominance of extensive factors over intensive--the increase in gross milk output (by 57 percent) is based primarily on growth in the size of the herd (by 52 percent) and to an insignificant degree on the productivity of animals (by 3 percent).

According to data on the inventory of pedigree cattle, as of 1 January 1974 the entire herd of cattle in the region has become pedigreed. Since 1964 the purebred herd has increased sixfold and comprises 33 percent of the total herd of cattle.

An increase in the share of purebred cattle was reflected in a 10.8-percent growth in productivity of cows during the Eighth and Ninth five-year plans as compared to 1965. A further improvement in genetic potential in enterprises as a whole did not yield the expected results because present feeding conditions did not allow the existing animal genotype to fully express itself in phenotype.

Research has determined that a 1-percent increase of purebred animals with a milk yield of 2,500-3,500 kilograms within the herd results in an increase in average productivity of 3.8-4.1 kilograms per cow. However, this tendency is characteristic of enterprises with low or average indicators of milk productivity. In enterprises with an average annual milk yield of 3,501-4,500 kilograms per cow productivity decreases when the proportion of purebred animals increases if feed conditions are not further improved. This means that an increase in the number of purebred animals in the herd and a strengthening of the feed base should be considered reserves for growth in the milk productivity of cattle in herds with an annual milk yield of up to 3,500 kilograms per cow; in enterprises producing over 3,500 kilograms of milk per cow the goal should be to improve feeding conditions in order to give the purebred herd the opportunity to realize its genetic potential.

The discovery and analysis of tendencies in feed production and feed consumption has shown that a disproportion between the development of livestock raising and the feed base is characteristic of the economic region--

the pace of growth of the standard herd of cattle forestalled the pace of growth of feed consumption by 2 points during the Ninth Five-Year Plan and by 5 points during the 10th.

The level of feeding of dairy cattle has practically not increased--during the 10th Five-Year Plan feed expenditures per cow increased by 17.4 percent as compared to the same indicator for 1965; in other words, the growth pace equalled 1.21 percent annually.

During the aforementioned period the expenditure of concentrated feeds increased by a factor of 2.1, reaching 27 percent of the ration. Here it should be emphasized that 67 percent of the concentrated feeds available in enterprises of the Central Economic Region is procured by the state. As a result of violations in procurement and storage technology the quality of feeds remains low--in 1984 only 26 percent of the examined hay, 18 percent of haylage, 17 percent of silage and 10 percent of grass meal was assigned to class I.

Modern feed production in enterprises does not meet the demand of the ever-growing cattle herd for high-quality feed in the quantity established by feeding norms. Thus, in Pakhomovo Breeding Plant of Tula Oblast the level of feeding of dairy cows increased by 3.2 percent during the 10th Five-Year Plan as compared to the ninth as a result of a 4-percent growth in the proportion of concentrates (in feed units); the proportion of haylage and coarse and succulent feeds decreased by 2.4 percent. The replacement of coarse and succulent feeds with concentrates resulted in a 9.7-percent drop in milk yield throughout the herd.

In Santalovo Breeding Plant of Tula Oblast the average annual herd of cows increased by 8.4 percent in 1980, as compared with 1976. Here the level of feeding increased by only 0.5 percent, and the volume of concentrates being fed--by 11.1 percent. The proportion of haylage and coarse and succulent feeds within the structure of the ration decreased by 5.7 points. As a result, under almost identical feeding conditions the productivity of cows equalled 3,865 kilograms of milk in enterprises in 1980 instead of 3,992 kilograms in 1976, and so forth.

Thus, in order to successfully develop dairy farming it is essential to achieve not only a feeding level that is adequate for the planned milk yield but also the corresponding structure of rations. Our research has shown that a milk yield of 4,000-4,400 kilograms is achieved by those enterprises which achieve a level of feeding in dairy herds equivalent to 5,000 feed units annually per cow, with the following ration structure--29-32 percent concentrates, 44-52 percent succulent feeds, 9-17 percent coarse feeds and up to 12 percent haylage. However, the proportion of concentrates in the ration of the dairy herd must be gradually decreased and replaced by coarse and succulent feeds.

An optimization of the feeding level and of the structure of rations in Butikovo Sovkhoz of Tula Oblast enabled it to increase milk yield to 4,000 kilograms per cow in 1983.

One of the economic indicators that characterizes the intensiveness of the branch and the efficiency of feed consumption is the indicator of feed expenditure for the production of 1 quintal of milk. It is directly proportional to the feed consumed by animals and inversely proportional to their productivity. The size of this indicator is determined by the quantity and quality of the feed being used, by the structure of the ration and by the effectiveness of the use of the feed by the animal's body for the formation of milk and meat products. Under conditions of underfeeding of cattle or of feeding it with low-quality feeds a large number of nutritive substances will unavoidably be used to support life and only an insignificant portion--to form products. According to VASKhNIL data (1983), in cows with a milk yield of 2,000 kilograms feed expenditures to support life comprise 47.7 percent of total nutritive value of feed, in cows with a milk yield of 3,000 kilograms--44.2 percent, 4,000 kilograms--42 percent, 5,000 kilograms--38.9 percent, 6,000 kilograms--35.1 percent and 7,000 kilograms--32.3 percent. This explains the large feed expenditures to produce 1 quintal of product (up to 201 feed units) in enterprises with low milk yield and low expenditures (up to 102-112 feed units) in enterprises with a milk yield of 4,000 kilograms and more (the breeding plant of Kolhoz imeni Kirov and Santalovo Kolkhoz of Tula Oblast and the breeding plant of Krasnyy Dobrovolets Kolkhoz of Smolensk Oblast).

In connection with the fact that under the natural-economic conditions of the RSFSR Central Economic Region an increase in the volume of feed production by means of the expansion of the area of feed lands is impossible, in our opinion it would be more expedient to deal with the existing problem by stabilizing the size of the herd in the region while without fail raising the productivity of animals, which will enable enterprises to curtail nonproductive feed expenditures for the maintenance of physiologic processes of animals, as well as by optimizing the structure of sowing area and by increasing the productivity of feed crops.

A high proportion of concentrates in the ration increases feed expenditures for milk and meat production but does not result in the necessary growth in productivity. As a result, there is an increase in feed expenditures for the production of 1 quintal of milk and beef; the cost price of production increases.

Thus, studies of feeding conditions in Krasnyy Oktyabr and Kommunar breeding sovkhozes of Bryansk Oblast, which are involved in reproducing livestock for both milk and meat directions, showed that with almost equal feed expenditures for the production of 1 quintal of milk the feeding level of cows in Krasnyy Oktyabr Sovkhoz surpassed that of Kommunar Sovkhoz by 28.4 percent. The structure of the ration for the dairy herd in Krasnyy Oktyabr Sovkhoz was more favorable than that in Kommunar Sovkhoz--the proportion of concentrated feeds equalled 22.1 percent in Krasnyy Oktyabr Sovkhoz and 30.7 percent in Kommunar Sovkhoz. The high level of feeding and low proportion of concentrates in rations were the basis for the higher milk yield in cows belonging to Krasnyy Oktyabr Sovkhoz as compared to that of cows belonging to Kommunar Sovkhoz. The difference in average annual milk yield comprised 29.5 percent.



The structure of cost price of milk includes a number of expenditures, but feed (41 percent) and wages (25 percent) take up the largest share. Cost price is inversely related to productivity ( $r_2 = -0.36$ ,  $R$  is less than or equal to 0.01), the degree of influence of which equals 13 percent ( $R$  is less than or equal to 0.01). The correlation coefficient between milk yields and the profitability level of milk production equals 0.38 ( $R$  is less than or equal to 0.01) in Smolensk Oblast.

Significant expenditures of manpower and feed for milk production and the low level of milk productivity and butterfat content in milk are the basis for the high cost price of milk even in breeding plants.

The breeding plant of Kolkhoz imeni Lenin of Tula Oblast (Black Spotted cattle) is characterized by a lower cost price for milk production (14.89 rubles)--here the indicators for labor-intensity in milk production and feed distribution per quintal of product (101 feed units) are also lower.

The most expensive milk (28.71 rubles per quintal) is produced by breeding enterprises involved in reproducing cattle of the Sychevka breed (combined milk-meat production direction), which is related to the low level of productivity of Sychevka cows (2,217 kilograms per cow annually) and to the large expenditures of manpower (7.5 hours) and feed (130 feed units) for the production of 1 quintal of milk.

The cost price of 1 quintal of milk in enterprises where cattle of the Schwyz breed are raised fluctuates by oblast from 19.99 to 25.46 rubles, decreasing during some years to 17.91-18.70 rubles in individual enterprises, which attests to the availability of reserves for decreasing the cost of milk production in herds of dairy cattle.

The comprehensive economic evaluation of production results of dairy farming in the breeding plants of enterprises within the Central Economic Region (according to data from annual reports) according to breed and level of specialization showed that the effectiveness of dairy farming is primarily determined by the herd's level of milk productivity. Moreover, in enterprises involved in reproducing specialized dairy breeds (Black Spotted and Yaroslavl) the effectiveness of this branch is higher (266 is less than or equal to 1 is less than or equal to 474)<sup>1</sup> than in enterprises having cattle of combined directions--Schwyz, Sychevka, Red Gorbатов and Kostroma breeds (143 less than or equal to 1 less than or equal to 301).

Increased specialization in the Sychevka, Schwyz and other milk-meat combination breeds under conditions of full-value, standardized feeding, a precise differentiation of production types existing within breeds, and the selection of animals of heavy weight (580-600 kilograms at the age of the third and greater lactations) and with a dairy-cattle type of build will enable us not only to increase dairy productivity of cattle to 4,500-5,000 kilograms of milk per lactation (correlation coefficient between live weight of mature cows and their milk yield comprises 0.93,  $R$  less than or equal to 0.001), but also to produce larger progeny and to deliver heavier carcasses for meat purposes under conditions of intensive raising and fattening of these animals.



Feeding conditions and feed quality have a significant effect not only on the quantity of resulting production and on the indicators of economic effectiveness of the branch--direct manpower expenditures, feed expenditures and cost price, but also on milk quality (content of fat and protein, acidity and so forth). According to the data of S. F. Budakova (1980), providing cows with high-quality rather than low-quality hay increases fat content by 0.08--0.30 percent. Our calculations show that increasing butterfat content by 0.1 percent in enterprises of the public sector within the Central Economic Region corresponds to increasing the volume of sales of milk to the state by 2.9 percent.

An analysis of the butterfat content of milk delivered by enterprises via state procurement showed that a decrease in butterfat content is characteristic of most oblasts of the economic region. Kolkhozes and sovkhoses supply milk that is below base levels for butterfat content, which results in significant losses in compensation. These losses are especially great (over 5 percent) in Vladimir and Kalinin oblasts. The enterprises of only four oblasts sell milk with a butterfat content above base levels, as a result of which they have achieved an increase in recorded milk weight above that which was delivered--in Moscow Oblast--by 4.3 percent, Smolensk--by 2.2 percent, in Yaroslavl--by 0.5 percent and in Ryazan--by 0.2 percent.

Production indicators such as the degree of cleanness, bacterial content and acidity, which characterize the sanitary-hygienic conditions under which milk is produced, stored and transported, have a great influence on the effectiveness of milk production and processing. Nevertheless, not all farms pay the necessary attention to adhering to the technology for the production and initial processing of milk or to the stipulations for washing milking equipment, apparatuses and units. As a result, 17 percent of the milk arriving in dairy plants is classified in group 2 by degree of cleanness; the same quantity of milk is classified in group 2 according to bacterial content and 2 percent is classified in groups 3 and 4.

Cooling milk prior to shipment is a reserve for increasing state milk procurement, for increasing the quality of milk products and for raising the effectiveness of dairy farming. At the present time only 38 percent of the total quantity of milk that is delivered to dairy plants is cooled to 10°C. As a result, 13 percent of all the milk has an acidity of 19-20°T; in other words, it belongs in quality category 2. Special attention should be given to the preventive maintenance and operation of coolers on farms.

Thus, the main reserve for increasing the production of milk and dairy products, for improving their quality and for improving the economic indicators of branch effectiveness of dairy farming in general is branch intensification--increasing the productivity of livestock while stabilizing herd size, improving the level of feeding by using more succulent and coarse feeds, introducing progressive prices and forms of organization for the receipt of livestock products directly in the place of production, and centralized delivery of milk to dairy plants using the specialized transportation vehicles of procurement organizations.

#### FOOTNOTES

1. One is the integral index for the overall evaluation of the effectiveness of dairy farming equal to the product of indicators for milk yield, butterfat content, sale of beef per cow, fertility, and monetary profits from the sale of milk and beef per ruble of expenditures. Indicators for productivity and effectiveness of dairy farming on the average in the enterprises of the Central Economic Region are assumed to be 100 percent.

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## LIVESTOCK

### PROBLEMS, PRIORITY TASKS IN LIVESTOCK RAISING VIEWS

Moscow IZVESTIYA in Russian 12 Oct 85 p 1

[Editorial: "Priority Task of the Agriculture Industry"]

[Text] The lexicon of economists, scientists, and production specialists has recently acquired the expression "priority task." This is not a simple combination of words. It is predetermined by the course of the party and state to intensify production, and consequently by the concentration of funds, resources, and manpower in today's important areas of developing the economy. This same trend also exists in the agroindustrial complex.

At a meeting of the party-economic aktiv of Kazakhstan, Siberia, and the Urals in Tselinograd, it was noted that now, while plans are being formulated for the new five-year period, it is very important for every kolkhoz and sovkhoz, every rayon, and all oblasts, krays, and republics to consider well the problems associated with increasing meat resources. "This is a priority task," it was emphasized.

More than once it was noted that in total calorie content of nutrition we are among the most developed countries in the world. But for meat--not quite. And this is the most intensive area in fulfilling the Food Program.

Raising a crop in a field, although it is not simple, and sometimes is even very difficult, still requires less expenditure of labor, funds, and resources than the "crop" of livestock farms. Furthermore, intensive methods in this sector have been assimilated, alas, by far from all farms. Fattening a steer up to 400 kilograms takes up to 1,000 days in some places, and sometimes even longer. And at the present, for example, since the beginning of the year the average 24-hour weight increase in feeding and fattening the "average head" of cattle is less than 500 grams, and for pigs--337 grams. Moreover, these indicators have become frozen at the level of previous years. This is despite the fact that recently the resource potential of the sector has increased.

It is, however, far from being fully exploited. And also because of "frozen" shortcomings in carrying out livestock raising for meat. Labor productivity is not high in this endeavor, industrial methods are being adopted too slowly, and in a number of places there are not enough herdsmen and shepherds. This is not the first year that the low standards of the cattle being sold have

been discussed, but the situation is changing for the better very slowly, and in fact is not changing everywhere.

In practically all rayons, however, there is experience of intensive fattening of cattle to a weight of at least 400 kilograms. There are many good, large farms which are producing pork on an industrial basis. Specialists have studied the requirements for feeds and microelements depending on breed and growth. Livestock specialists have learned how to calculate the ration of cattle using 25-30 parameters. And all of this is not sufficient to substantially increase meat production in the new Five-Year Plan.

Unfortunately, it must be noted that certain Soviet organs and specialists at farms and rayon agroindustrial associations have held back expensive methods of meat production. Work is going worse than last year on farms of Uzbekistan, Kazakhstan, and Kirghizia, and Kirov, Kurgan, Orenburg, Chelyabinsk, and Kemerovo oblasts. The competition of livestock raisers is purely formal in nature in some places.

The main "objective reason" which some farmers conventionally cite is the lack of feed. But if we examine the state of affairs in two neighboring oblasts--Kurgan and Chelyabinsk--we see that more hay and haylage have been laid in here than last year. More silage has also been laid in on the kolkhozes and sovkhoses of Kurgan. Even last year these oblasts were not so poorly provided with coarse and succulent feeds. Clearly, the former habit of a concentrated type of feeding is still in effect. Including in dairy livestock raising, which takes away part of the grain from cattle for the butcher shop. This is characteristic of many farms and other zones.

Furthermore, something else must be mentioned about this. We allocated more than half of the gross harvest of grain for the needs of farms. But it is frequently poorly used--it goes into the feeding trough in pure form, without preliminary preparation and balancing of its components. In the country today there are 80,000 feed preparation shops in 47,000 farms. But several thousand shops are still not ready for work.

When we talk about concentrated feeds for livestock raising, especially for meat, we must not forget about the chronic failure of the combined feed industry to live up to requirements. Issuing their goods to kolkhozes and sovkhoses at a fairly high cost, the partners of livestock raisers have not been able to improve the quality of the expensive fodder very much. Certain departments are not at all able to regulate their relations, among which a central role belongs to the USSR Ministry of Procurement. Livestock breeders and the combined feed industry have pinned serious hopes on the Main Administration of Biological Industry, but so far its role in resolving the feed problem is clearly inadequate.

We cannot help but mention how the Ministry of Meat and Dairy Industry is failing to live up to the requirements of intensifying the system. The poor technical outfitting, and sometimes even obsolete nature of many enterprises, the low technological and labor discipline, and the turnover of cadres--these are long-standing afflictions of the sector, from which it is completely unable to escape. Local receiving of cattle is being adopted too slowly. The

ministry is talking about centralized removal. But not only the centralized system is necessary, but also local receiving, with personal responsibility for losses of the high standards of animals from being kept too long in meat combines and other mistakes in processing.

Life itself demands: the USSR Ministry of Agriculture, Ministry of Procurements, Ministry of Meat and Dairy Industry, Ministry of Machine Building for Animal Husbandry and Fodder Production, the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, and other departments of the agriculture industry must solve in a serious and comprehensive fashion the problem of increasing meat production on an intensive basis.

At present, preparing cattle for winter must be completed as quickly as possible. It is very important not to permit in the transition period (as still sometimes happens) any reduction of the productivity of the herd. It is necessary to take careful note of the lessons of last winter, and plan everything in order to avoid interruptions in production. Farms should receive utility service without interruption.

The key element in resolving all these problems is work with the cadres on whose efforts the endeavor rests. Concern for working people on farms should be central for leaders on farms and departments of the agriculture industry, and for local soviets. They have earned this concern with their labor, which is so vital to the country.

In short, there are still problems which must be resolved before the beginning of winter. The time for this is short, but it is there, and it must be used as well as possible, to lay the groundwork everywhere for rhythmic operation of farms, fulfillment of plans and obligations, and a successful start to the new Five-Year Period.

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## REGIONAL DEVELOPMENT

### UZBEK DECREE ON PRIVATE PLOT, SUBSIDIARY FARM EFFICIENCY

Tashkent PRAVDA VOSTOKA in Russian 29 Jun 85 p 1

[Article: "At the Presidium of the Uzbek SSR Supreme Soviet"]

[Excerpt] At its regular session, the UzSSR Supreme Soviet examined the work of republic soviets of peoples deputies to improve the efficiency of subsidiary farms at enterprises and organizations and to develop private plots as called for by the Food Program. It was noted that subsidiary farms are an important help in improving the population's supply of foodstuffs. However, because of insufficient attention to them on the part of soviets, managers of enterprises, organizations, ministries and departments, many of them are still not making a notable contribution to increasing food resources. Their output of meat, milk, eggs and produce remains low and is only slowly growing. It even declined in 1984 at some subsidiary farms of enterprises and organizations in the Kara-Kalpak ASSR, Bukhara, Dzhizak, Kashka-Darya, Syr-Darya and Khorezm oblasts. The product is high cost. Many local soviets, ministries and departments do not show the necessary interest in the work of subsidiary enterprises and do not greatly influence improvements in their efficiency or in solving the problems facing them.

As was noted, the more than 2 million private plots in the republic account for more than half the gross output of animal products and produce. Soviet and farm organizations do not give them the necessary attention. These plots are poorly supplied with seedstock, young livestock and poultry, tools, fertilizers, construction materials, and transportation. The purchase of surplus products by state and cooperative organizations is poorly organized. Procurement organizations do not sign purchase contracts with citizens, leaving this to chance. As a result, the supply of fruit and vegetables to the republic's cities leaves much to be desired.

The presidium decree on this problem obligates soviets of people's deputies and their organs to improve the management of subsidiary farms at enterprises and organizations and to elaborate and implement additional measures to increase their production of meat, milk, fruit and vegetables and to improve accounting and reporting. It is recommended that soviets increase the

attention they pay to the development of private plots, increase the purchase of surplus products from the population, organize their planned delivery to city markets and establish effective deputy control over procurement organizations' work. Ministries and departments have been given specific instructions on these matters.

11574

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MOZHAYEV ON MORE INDEPENDENCE FOR FARM MANAGERS

Moscow LITERATURNAYA GAZETA in Russian 15 May 85 p 10

[Article by Boris Mozhayev: "Independent and Unconditional"]

The April 1985 Plenum of the CPSU Central Committee adopted the Degreeon convening the next, 27th party congress in February of next year and defined the tasks in preparing for and conducting it. A great deal of attention at the Plenum was devoted to development of the economy, including agriculture. The need was noted to try to insure that there is a single master on the land and that agroindustrial associations carry complete responsibility for fulfilling the Food Program.

Today we are publishing a writer's thoughts on this topic.

In one of the newspapers I read that the yield in Ivanovo Oblast is low. At the Savinskiy Sovkhoz, for example, less than nine quintals on the average. And the average milk yield per cow in the oblast is 1,800 liters, that is, approximately 5 liters per day. So this is average! And what about the minimum? Three liters? Two? One? But enough: are these cows?

The correspondents, the authors of this article, criticize the oblast and rayon leadership and RAPO [Rayon Agroindustrial Association]: they write that organizational and indoctrinational work has slackened and that work must be carried out in a new way. And so on and so forth. I read it and I was saddened.

But, of course, organizational and indoctrinational work -- all this is necessary. But you can knock yourself out with your smartness and eloquence too, yet if you are poorly supplied with needed equipment, fuel, spare parts, fertilizers, or electricity, then no matter how you flutter your tongue and how your spry feet spin, you will not be able to raise milk and harvest yields, which lie like dead weight on a heavy cart.

But supply is also no longer a magic wand able to start this cart rolling up the hill -- you must have workers, as they used to say in olden times, not simply service personnel mobilized in an emergency nor drunks and riff-raff recruited to put out a fire, but educated agricultural machine operators who

know their jobs well and perform them with enthusiasm. But then 2 years ago I went to the Veryayevskiy Kolkhoz in Ryazan Oblast and saw that there were three tractors for every tractor driver and not enough milkmaids. What kind of harvest and milk yields can you expect there? They are not, as the saying goes, getting fat...

And that is still not all. For normal life a farm must be independent, as was said in plain terms at the recent Plenum of the party Central Committee. That is, the structure of planted areas, and the livestock herd, and the plan for construction work must all be determined by the farm itself. And the conditions established by law must in fact exist to insure both the prompt sale of output and the purchase of equipment, fuel, and fertilizers, and there have to be legally formulated agreements on times for building production buildings and housing. And those guilty of not fulfilling any of these conditions must immediately be held accountable.

It would seem that in analyzing the difficult condition of farms in one rayon or oblast or another, we are above all obliged to direct attention to the observance of these fundamental conditions. But almost nothing was said about this in the article mentioned. Now, they say, there is the RAPO and they have all the necessary authority, they have the cards in their hands.

This is what was said about the Arzamas RAPO at approximately the same time in LITERATURNAYA GAZETA, in K. Kozhevnikova's article "Overcoming": "The RAPO fund was set up. They want to take part of the money for bonuses or other needs. The bank manager says:

"That is not allowed. Here's a letter from the Ministry of Finances. RAPO funds may be created, but not spent -- this has not yet been authorized."

There is independence for you. Fortunately, financial officers do not rage with such absolute rigor in all the republics. When I was in Limbazhi, Latvia I read this part of the article to Svarts, chairman of the rayispolkom. He said, in surprise:

"Our RAPO has also set up a monetary fund and spends it freely," he said. "If some farm is having difficulties, it gets help. We spend it for bonuses and even for stipends -- we send fellows to tekhnikums and institutes."

And here he began to complain about all kinds of constraints on RAPO's in their main work, in distributing equipment and fuel.

"This is what happens with us: some farm doesn't have enough tractors but has extra reclamation workers. But we don't have the right to force them to sell an extra tractor to the kolkhoz. The reclamation workers themselves would like to sell it but they can't do it without the permission of their own ministry. And try to get permission! Another thing that happens: construction workers urgently need transport, but we don't have the right to transfer even a trailer which hasn't been used for a long time from Selkhoztekhnika to the construction site. In winter reclamation workers' equipment is not heavily used, but in kolkhozes and sovkhoses it is a feverish time: hauling feed, snow retention, and other things. So try to take a few

vehicles from the reclamation workers! What are you doing, they say. You'll break your head open before you get through."

Svars talks heatedly, with the vigor of an indefatigable young man; in fact, he also looks young -- no gray hair, no wrinkles -- although he is already past 40. And this age, this conviction of a man who has done a lot of work manifests itself now and then in a sad sigh of bewilderment or in a poorly concealed bitterness, or rather irritation at the helplessness which he, despite himself, sometimes feels.

"But why don't they trust us? Why do they tie up our hands and feet? Before we could maneuver reserves of fuel within the rayon but now -- no more! It's forbidden. Each kolkhoz or sovkhov must only use its own coupons. A neighbor doesn't have the right to turn over fuel saved to his neighbor with our consent or by our order. One farm, for example, reseeded summer crops or corn -- frost knocked it down and the dew ate it up. There are plenty of reasons for unforeseen work. Farming is a complicated business. And then this farm didn't have enough fuel; but everything went fine for his neighbor, who saved some. But don't dare turn it over to the neighbor or lend it to him. It goes to the depot! And let the neighbor flounder. Is that really how to do things? We have to fight thieves who sell fuel on the black market, but why tie us up like this?"

"And what about the livestock herd and planting areas?" I asked. "Can the RAPO change them?"

"You labor away with specified limits," smiled Svars. "At least 50 percent of our fields must be planted with grain. No matter what, you might say. They don't ask us if grain is profitable or not. And the percentage for potatoes and beets is rigid too. The total number of livestock can't be reduced either. But we maneuver in some places. Last year the cattle herd at the Liyeupe Sovkhov was reduced; in simple language, they were allowed to cull the herd. And milk yields at the sovkhov increased, especially for the dairy complex. Profitability also rose."

Svars is now secretary of the party raykom in another rayon. He was promoted on his merits. Shifting personnel is an important point. But this alone cannot achieve much. The principles of management must be changed. Is it good business when the Liyeupe Sovkhov was forced to beg for several years for permission to simply cull the herd? Is it good business when representatives of all the departments of Selkhoztekhnika, Selkhozkhimiya, reclamation, and others who diligently participate in the RAPO live and function apart from its will -- they redistribute both resources and profits in their own interests, based on their own Union departmental subdivisions.

I asked Kheyno Tynisovich Vel'di, head of the Estonian Agroindustrial Association and first deputy chairman of the Council of Ministers, if he considers the system of distributing funds by Gosplan departmental lists normal. He answered no, it would be better to make equipment and fuel and everything else legally dependent on the output turned over by the farms, rather than to distribute them by departments.



In other words, who gets a truck or a wheelless cart must not be determined by some Ivan Ivanovich, but commodity exchange should regulate commodity-monetary turnover as fixed by law: if you have turned over so many tons of meat, milk, or grain -- deposit the money and buy a tractor, truck, or combine or maybe iron, cement, or bricks.

He also talked about the fact that farms must be given the right to freely select partners with whom to enter into direct contractual relations and carry on useful exchange of output. There is a great deal of pedigreed livestock in the southern part of the republic while in the north there are fine elite varieties of clover and alfalfa seeds. Let them make an exchange.

This matter is complicated and must not be decided in a rush, they will tell us. In the first place, it is not a rush; business persons posed these questions 10 and 15 years ago. And secondly, an even more complicated matter depends on solving them -- agricultural production and the organization of rural life.

But when planning does not take local conditions and the potential of the land into account, there can be nothing but losses.

Let us look at planning practices a little more closely. Let us take the same Liyepupe Sovkhoz in Latvia's Limbzhskiy Rayon. I go there every year and live for a month or even two in the summertime -- I have been observing this farm for a long time.

Just 2 years ago its profitability was at a very low level. Peterson replaced Director Brinyan'sha. And I want to begin analyzing the farm from that very year, so that it later becomes clear which levers helped improve work slightly.

Here are indicators for the start of 1983: 64 head of cattle and 117 pigs per 100 hectares, and in addition 20 private cows. This is a very high density of livestock: the figures came down from above, and the sovkhos did not have the right to change them. At first glance everything seems fine: the farm was compelled by force of will to keep an enormous number of livestock, for the general benefit so to speak.

Alas! This benefit is illusory. In wintertime the cows in the complex give only 2.5 kilograms of milk a day and in summertime -- about double that. This yield can be obtained from a decent nanny goat. So the cows of the famous Latvian brown breed have been turned into goats. And it is hardly surprising that the sovkhos was up to its ears in debts and made no profit at all, but had millions of rubles of losses.

But why? Who is to blame for this?

Vilnis Karlovich Kalnberzin', the sovkhos economist, is an experienced man with higher education: his thick ledgers give a chronicle of the farm for many years. You look and it becomes clear how his progressive sovkhos, which received the banner of the Council of Ministers twice in the 1960's, came to such a life.

In 1972 the Liyepupe Sovkhoz was combined with two neighboring kolkhozes -- the Kolkhoz imeni Chapayev and the Nakotne Kolkhoz. Arable lands and fields are in patches here: pasturelands, fields, and meadows are squeezed among forest areas, hills, and river hollows. After they were joined, the sovkhaz area was extended by more than 20 kilometers and you could only travel from end to end by a round-about route.

In the past each farm had used its own land skillfully; well-organized crop rotations with good interlayering of clovers and grasses yielded plentiful feed and the dairy units were assigned perennial grass pasture lands which they managed. Milk yields were at least 3,000 kilograms from each cow and the grain yield at both Nakotne and Liyepupe was more than 30 quintals per hectare. The sovkhaz yielded profit and the kolkhozes had substantial indivisible funds.

But the advocates of bigness decided: what kind of a farm is this with just 2,000 hectares? In the Kuban or the virgin lands, they have 20,000 hectares. That is real scope! Combine them!

It was decreed, and that was it. The rayon was against it. The sovkhaz and the kolkhozes were against it. But so what? After all, they are foolish children: they do not understand how to make grain factories and have them pour out rivers of milk.

We already know how the rivers of milk flowed from every cow and the "grain factory" fell to 20 quintals per hectare in average annual yield in the last five-year plan period. In 1972 the 3 farms turned over 600 tons of meat, but after the enlargement it took them 6 years to return to this figure.

With the combining of the farms an "economy campaign" went into full force. First, millions of rubles from the kolkhozes' indivisible funds went into the state budget; secondly, the number of trucks, tractors, carts, and agricultural machinery for the sovkhaz did not increase after the two kolkhozes were combined -- in fact it was halved. The limit for fertilizer was also cut. But the main thing was that funds for construction were cut sharply. And the construction office was even closed. And an acute housing crisis arose in the consolidated farm, bringing with it a labor shortage and high personnel turnover.

The director tried to solve this problem with a certain independence: using capital repair funds he bought buildings in Estonia, shipped them himself, and assembled them by the in-house method, each day risking coming under investigation for his unauthorized building. You cannot solve the housing problem with such pathetic efforts. And the sovkhaz still does not have enough tractor operators, drivers, milkmaids, and shepherds.

They were happy to see anyone passing by, on foot or by vehicle; they accepted them all, and even tolerated drunks and truants. So a newly arrived person would be accommodated in a remote village with everything needed for a care-free life: he sleeps away while his truck stands at the door; if he wakes up

during the night and wants to go for a drive or haul something -- why, just go ahead and do it!

And what about trucks! They drove to dinner on their tractors, for example, or visiting or drinking. Painfully good... And they tolerated this too. Fire that drunk and you won't find another good worker in a month of Sundays. And if they came, where would they live? You can't weave a nest in the oak tree and put a worker up there. You need apartments.

The sovkhos managers said: give us money for housing. They were given millions... but only for cattle buildings, that is for complexes built according to the "Lvov method."

How many generations of the famous Latvian brown breed did the peasants raise so that it was renowned worldwide for its milk yield and the milk's high fat content! And they kept good pastures for it, the feed abundant, and crop rotations in order -- everything for this cow, everything for butter, milk, and meat. And they resisted and feared for their cow when this most "progressive method" was introduced there. Incidentally, a recent article in LITERATURNAYA GAZETA revealed that in Lvov Oblast the cows are kept in small well-mechanized livestock units rather than in stone "palaces."

The people of Limbazhi were told in plain language then that the new method was industrial. Your livestock unit has 100-200 head, while here the livestock unit has 800. A significant difference! There is the common electric milking machine, here is a carousel. Fewer milkmaids are needed, see? Yes. There the cows are in livestock units here en masse, so there is more economizing on herdsmen, calf attendants, and caretakers. In short, economizing throughout.

Sovkhos specialists stated that there were no pastures for this herd. Here, where the complex is planner, there are only 235 hectares, but a minimum of 400 is needed. Again in plain language they explained to them: we will water these 230 hectares for you and make them intensive, irrigated fields. Did they understand?

They did not even start talking about the lack of housing near the complex: housing was not part of the progressive method's program.

They did what they said. They built the enormous wings of the complex in an open field and equipped them. "But what about watering the pastures?" asked the dissatisfied landowners. "Don't worry," they were told. "watering the pastures was included in the plan: by 1985 the first 100 hectares of pasture land will be irrigated. By 1990 -- the rest. Understand?!"

But the first spring 800 cows turned these 230 hectares of poorly prepared pastureland into a stream, and this was in dry weather; and when it gets muddy the pasture turns into filthy mire. I saw this complex. The facade was marvelous: broad Venetian windows and white walls of silicate brick stretched almost half a verst; in front of the facade were flower beds, fancy little paths, and broad gates for the formal entrance. A palace, nothing less!

We put on white robes and went in two's with animal technician Anna Chakste to the production block. There the picture was different: the cement floors of the long run and the stall blocks going out from it in various directions were cracked and broken, holes filled with stinking puddles which did not dry up, causing many cows to go lame. The areas for calves were small and dark. "We cut them open ourselves so that the calves don't suffocate," says Chakste. Most of the calves are on tethers, right in the pens. Chilling drafts move along the ground.

The discordant mooing of many cows was heard beyond the entrance gates. Two barefoot girls in raincoats and with sticks -- herdswomen -- came running in. They asked us to open the gates, the cows were hungry and bursting to get into the pens. But the supplements had not been brought yet. Chakste told the girls that it was still too early. They sadly headed back toward the gates. The cows smelled us and -- no longer mooing, but now roaring -- demand: Open up!

The sovkhos was put in difficult conditions, what else can you say. It was no simple matter to make ends meet there. I talked with Vilnis Kalnberzin'. Here is what he said:

"In order to feed this number of cattle, we must either redo our planting plans and emphasize planting feed crops or harvest a minimum of 57 quintals a hectare with the present structure, even for grain. But our land is not capable of such a yield; according to an old cadastral evaluation, it is only 43 points, that is, the maximum yield is 40-42 quintals. And in recent years the yield has declined to 20 quintals: weather conditions are difficult, and we are short of fertilizers, people, and equipment. Of course, we could increase the yield from the land by changing the crop rotation, but we are not yet allowed to plan the planting ourselves. Before we planted grain on suitable lands, approximately one-third of the planted area, and got at least 30 quintals per hectare. But now the amount of land planted in grain has been increased and we are given less fertilizer. And yields are declining. We are getting almost the same amount of grain. But how much less feed there is! We grow grain at great cost and turn it over for 9 kopecks a kilogram; then to replace it we buy fodder, the same grain but already 24 kopecks a kilogram. That is where the losses come from."

Leaders at the rayon know what expenditures this confusion leads to but cannot presently change this practice.

We are accustomed to say: we do everything by plan -- what has to be turned over to the kolkhoz or the sovkhos, what must be obtained from them -- all this is written for the year and for 2 years ahead and the deadlines are included.

Try not to turn over the milk or meat by these deadlines! They'll chew you out on the spot! But if fertilizer, or equipment, or fuel is not delivered to this same kolkhoz at the scheduled time according to the counterplan, no one even bats an eyelash. But what kind of independence can the farm have under such a system? You give us everything we ask for and we will give you everything that we can, but what we cannot -- sorry!



Then sometimes they will be given a combine or truck and cannot even work on it. I saw the sovkhos spend a month reassembling the bed, and the cab and undercarriage, too, of a new truck. And then what? Do you think the supplier paid a fine? Not at all.

I can imagine how pleased Vilnis Kalnberzin' was to read in the materials of the last Plenum of the CPSU Central Committee: it is not permitted for departmental interests to get the upper hand or stand in the way of solving the problems of comprehensive development of agriculture.

When Peterson took over Briny'n'sha's position, I asked him:

"What do you intend to do?"

"First of all, cull the herd, that is, reduce the herd of livestock, or change the structure of planting areas," answered Karl Karlovich.

"And if you're not allowed to?"

"Then -- things will be in a bad way. I'll leave myself."

He was allowed to reduce the herd and this was the result: milk yields in the complex almost doubled. As for crop rotation, supply, and construction, here the picture remained the same. And there still are not enough workers.

Nonetheless, the changes for the better are appreciable. Even in 1983 they finished with a profit for the first time in many years. How did they get a profit?

"Mainly due to a new rule: if the average annual level of production of the preceding five-year plan period is exceeded, then a supplement to the price for meat, milk, and potatoes is paid; our entire rayon exceeded it -- that's where the profit came from," answered Peterson.

But I recalled how in August of that year I visited the Staytsele Kolkhoz. An elite potato variety was ripening there, despite the dry summer, but the chairman complained:

"All my labors have gone to waste! These potatoes will go for a song."

"But why?" I was surprised.

"Because there is an order that if a rayon on the whole does not exceed the average annual gross output of the previous five-year plan period, the supplement isn't paid. Our neighbors have poor potatoes so mine will go for 6 kopecks a kilo too."

Fortunately, his fear was not realized. But nonetheless I would not want to be in his position.



And what kind of intelligent people are they sitting in the offices where prices and supplements are set? How well do they reason? That we pay too little for potatoes? Are you going to lose money? All right, we have increased it. But if you want to make money, take care of your neighbor Kuz'ma, since he is slow; if you don't stir up Kuz'mu -- I'll take it out of your pocket. This is called concern for the general welfare.

By the way, Karl Karlovich Peterson worked as the chairman of one of the country's first RAPO's for 2 years.

"And why did you leave the RAPO?" I asked him.

"Because the goal which I worked for there was not achieved. We set up an experimental RAPO in order to make all kolkhozes and sovkhoses independent," he said. "But the funds remained in the hands of the departments; all the farm's output is taken to one and the same place and that's the reason for all the crowding and confusion. You can't buy anything for money, if the farm has any. No, that's not the independence we dreamed about."

In order for the farm to be independent in the complete sense, it must be made an equal partner with any supplier and with any contractor, like land reclamation workers or Selkhoztekhnika.

Everybody knows that the current plans given to the kolkhoz or sovkhos for potatoes, for example, or for meat or milk, are often unprofitable unless the supplements to the price are used also. Many farms turned over this same potato for 6 and 8 kopecks apiece, while its prime cost is more than 10 kopecks. A ton is turned over and we're immediately hung with about 50 rubles of debt.

Energetically protesting against the practices which have developed, Edvin Lapinevich Svars, said to me:

"According to the old cadastral scale our lands on the average in the rayon were evaluated at 38.5 points, the lands in Dobelskiy Rayon -- at 52.6 points, in Yelgavskiy Rayon -- at 59 points, and in Bauskiy Rayon -- at 50 points. In 1969 the Liyepupe Sovkhoz won the banner of the republic's Council of Ministers with a yield of 31.5 quintals per hectare since the yield was equivalent to 45 quintals on good lands. This is fair. But now what?"

He showed me the book of economic calculations for the republic's four rayons. The unit of calculation was "1,000 hectare-points." This unit takes account of the land's fertility and economic investments.

"So," continued Svars, "we keep 61 cows per 1,000 hectare-points, in Dobelskiy Rayon -- 38, and in Yelgavskiy Rayon -- 37; according to plan in 1980 we should have about 177 quintals of milk per 1,000 points, the people in Dobelskiy Rayon -- 118 quintals, and the people in Yelgavskiy Rayon -- only 111 quintals. We work more intensively than others but they beat us because we are behind in absolute figures for delivery of output."

Of course, such arguments can be ignored. In general, you can brush aside any truth like a fly. But the land cannot be deceived. No plan for planting, even the boldest and most optimistic, will increase yield without taking into account the specific features of the land, the climate, and the farm's potential. It will only worsen and deepen the failure of the harvest and losses. We have seen this bitter truth for dozens of years in succession; we have spoken of the flaws of such practices and prohibited them many times. But they are very hardy in places. Using them, bureaucracy declares itself at the top of its voice: I am your God! One can say in paraphrasing the poet's famous line that bureaucratism is the most worthless thing there is: it exists in absolute ignorance. But what kind of independence can the farm taken singly have if it does not pay tribute to bureaucratism as a method of management?

But yet, in the confines of our Homeland there are examples of how red tape and bad workmanship can be eliminated by one simple decision. Here is one of these examples for you: Grant Petrosovich Petrosyan, the director of the Institute of Soil Science and Agricultural Chemistry of the Armenian SSR, got an order under which what reclamation workers were obliged to turn over to the institute was the project as a whole in final form -- wheatfields planted in formerly saline soil -- not particular types of jobs such as dug-out channels, tiled drainage, or treated saline soil.

"Esteemed reclamation workers," Petrosyan says to them, "you have treated the saline soil areas -- that's good. But now kindly plant wheat on this section; and then when it reaches its full growth we will see the quality of your work. If the wheat comes up evenly over the entire field, we'll sign the acceptance document. But if bare spots appear in the field, kindly do it over and bring it up to the specifications."

So the Armenian reclamation workers may be unable to deliver a field for 4 years. How much noise was there because of this?! The minister himself came and tried to break this system. He did not succeed. And imagine, they are doing it over and bringing it up to the specifications.

So Petrosyan had a little more than 200 hectares of marvelous fields and orchards among the saline desert. And the yields were very high. But in neighboring sovkhoses enormous bare spots of empty land were visible in the wheat even at a quick glance. There are contrasts for you in the work of one and the same ministry.

I talked with the reclamation workers: they are angry with Petrosyan. But he is simply a scientist and an independent director in the complete sense, given proprietary rights by law.

An old saying goes: only God is independent and unconditional. But then, according to another saying the master is equated to God Himself: there is no master except the master. There is real wisdom in these words: the master's independence is only worthwhile when it is unconditional. There is no need to fear that, with a certain freedom of action, the master may head in the wrong direction. Ultimately, we have laws: it must be insured that they are all administered equally. And there will not be leaps to the wrong side. And

discipline will be greatly strengthened from equal, compulsory observance of laws.

Obedience to laws makes order and harmony. So we should give consideration to those decrees which give our farms the right to manage their own land and their own business.

12424

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## AGRO-ECONOMICS AND ORGANIZATION

### MURAKHOVSKIY ON NEED TO STRENGTHEN STAVROPOL KRAY APK

Moscow PARTIYNAYA ZHIZN in Russian No 11, Jun 85 pp 43-48

/Article by V. Murakhovskiy, 1st secretary of the Stavropol Kray CPSU Committee: "Effective Use of the Potential of the Agroindustrial Complex"/

/Text/ At the present time, preparations are being launched for the 28th CPSU Congress on an extensive scale throughout our entire country. The Stavropol workers, similar to all Soviet people, are striving to complete successfully their work aimed at fulfilling this year's plans for economic and social development and in this manner ensure a confident start for the next five-year plan.

The agrarian policy constitutes a most important part of the party's economic program. It is directed towards improving the productive forces of agriculture and also the socio-economic relationships in the rural areas. This is reflected in the decisions handed down during the April (1985) Plenum of the CPSU Central Committee. It was emphasized during the Plenum that the kolkhozes, sovkhozes and processing enterprises have the potential at their disposal for increasing considerably the production of food goods. They need only make efficient and thrifty use of the available potential.

The kraykom /kray committee/, Karachayev-Cherkessk obkom /oblast committee/ and the CPSU raykom's /rayon committees/ are constantly coordinating their practical work with the party's requirements and they are constantly carrying out the measures adopted by it aimed at intensifying the agrarian sector of the economy.

In carrying out this work, a large role will be played by an increase in the responsibility of those leaders and specialists associated with kolkhoz and sovkhoz production. The kray's party committees are displaying concern for developing leaders and specialists who, in terms of their level of knowledge and competence, will be capable of managing agriculture in keeping with modern scientific achievements and making skilful use of intensive factors for increasing agricultural production and also production in its associated branches.

A high degree of professionalism, initiative and persistence is being displayed by such agronomist as I.P. Nosatenko of the Zavety Ilich Kolkhoz in Grachevskiy Rayon, Candidate of Agricultural Sciences I.V. Budanov of the

Orlovskiy Kolkhoz in Kirovskiy Rayon, zootechnician, Hero of Socialist Labor and Candidate of Agricultural Sciences V.A. Moroz of the Kolkhoz imeni Lenin in Apanasenkovskiy Rayon, L.S. Kutsenko of the Kolkhoz imeni Chapayev in Kochubeyevskiy Rayon, T.K. Reshetnikova of the Sovetskaya Rossiya Kolkhoz in Georgiyevskiy Rayon and many others.

In short, the party committees have many upon whom they can rely in carrying out the program for the intensification of agriculture and for making extensive use of the economic levers for production control. Using the examples set by the best leaders and specialists, we teach others to employ a creative approach in solving the problems confronting them and to manage their economies in an intelligent and knowledge manner. Indeed it is no secret that by no means have all of our leading personnel and specialists mastered the economic methods for management. Some workers possess only a vague knowledge of such categories as price, production cost, profit, profitability and output-capital ratio and they are not always able to perform skilful analysis or to provide a correct economic evaluation of the work of a kolkhoz, sovkhoz, processing or procurement enterprise. And thus it comes as no surprise to learn that such economic figures devote very little thought to the return from investments, the utilization and turnover rate for capital, output quality or the role played by all of these factors in strengthening the rural economy.

They must be provided with assistance in understanding the importance of economic work in the rural areas and an interest must be instilled in them for performing economic analysis and for promoting closer contacts between experience leaders and less experienced ones. It has become a rule, for example, to assign the deputy chairmen of kolkhozes or sovkhoz directors who have displayed fine organizational capabilities to perform work in a probationary status under the leaders of leading farms. Initially, these probationers undergo theoretical training in a department for improving skills of the Stavropol Agricultural Institute and thereafter, for a period of 4 months, they study the operational forms and methods of the best kolkhoz chairmen or sovkhoz directors, they learn the leading methods for organizing production and wages and for performing economic analysis and they develop the ability to evaluate situations and to make the best decisions. This method for working with personnel is receiving greater recognition and use. In recent years it has been used throughout the kray for training chief farm specialists, raysekhkhotekhnik managers and the deputy chairmen of RAPO's /rayon agro-industrial associations/ for economics.

At the same time, the rayon party committees are intensifying their control over the work being performed by members of RAPO councils, leading specialists attached to rayon agricultural administrations and the leaders of kolkhozes, sovkhozes and agricultural service enterprises. Individual interviews are being conducted with them. Their work is being reviewed during meetings of party committee bureaus. The economic leaders issue regular reports concerning their production and political work to the labor collectives and party organizations. Taking advantage of their right, the primary party organizations exercise control over the work of an administration in connection with the chief trends in the intensification of agricultural production -- the introduction of scientific and engineering achievements and leading practice, the dissemination of progressive forms for organizing and stimulating labor and implementing improvements in economic work.



All of this serves to sharpen the ability among farm personnel to think in a thrifty and intelligent manner and to manage a farm efficiently. Thus the RAPO councils analyzed the degree to which existing production and procurement plans take into account the available potential of kolkhozes and sovkhoses. It was discovered that in a number of regions the tasks being assigned to the farms are at times not sufficiently tense. In accordance with a recommendation by the kray party committee, the RAPO specialists, jointly with workers attached to the Stavropol NIISKh /Scientific Research Institute of Agriculture/ and a branch of the Kubangiprozem Institute, carried out a quality appraisal of the soils and they rated the fields. A comparable hectare was established as the single indicator. Coefficients were introduced which make it possible to relate all of the products to the single indicator -- in feed units -- and to compute the actual output from each comparable hectare.

This made it possible for the kray and rayon councils of agroindustrial associations to form equally tense production plans for the farms and to eliminate the notorious wage levelling factor in planning the rates for production growth based upon the level achieved, which is causing great harm. For example, the plan for the current five-year plan called for a rate of growth of 9 percent for the farms in Apanasenkovskiy Rayon and in Novoselitskiy Rayon -- 40-42 percent. These plans were accordingly ensured by the required capital investments and material resources.

A thorough study of local conditions and the production specifics and the elimination of undefined responsibility out on the fields are making it possible to raise the output yield per unit of available or newly arriving material and financial resources. At the Rossiya Kolkhoz in Novoaleksandrovskiy Rayon, for example, during 4 years of the current five-year plan, meat procurements increased from 1,650 tons to 2,760 tons, or by a factor of 1.6, with a considerable increase taking place in the production of milk and wool. Over the past 4 years, the gross output volume at kolkhozes and sovkhoses in Kirovskiy Rayon increased by 28 percent.

The work being performed by many leaders and specialists throughout the kray today is characterized by an improvement in the level of management and by knowledge of the specifics and economics of production. This is borne out in particular by the experience of the Kazminskiy Kolkhoz in Kochubeyevskiy Rayon. Its specialists, together with scientists attached to the Agricultural Academy imeni Timiryazev and the Stavropol Agricultural Institute and acting upon the initiative of the farm's party committee, developed and introduced a branch control structure and enlarged crop rotation plans, they created mechanized detachments for the cultivation of grain, technical and forage crops and they established the wages for the farmers and livestock breeders so as to be dependent upon the final production results.

In discussing an experiment in efficient management with workers, farm leaders, specialists and scientists, during a conference held in the CPSU Central Committee on 8 April of this year, the kolkhoz chairman A.A. Shumskiy placed emphasis upon the fact that earnings on the farm are directly dependent upon the amount of gross income. And this indicator, as is known, is associated not only with the yields but also with the quality of the products and the expenditures required for producing them. Thus each worker is interested in lowering the production costs and ensuring the thrifty consumption of resources. The conditions are being created for genuine cost accounting operations.

The measures undertaken made it possible to raise sharply the efficiency of all of the kolkhoz's branches and to increase considerably the production of goods and mainly by means of intensive factors. For example, the grain crop yield increased to 43.9 quintals per hectare and the milk yield per forage cow surpassed 3,600 kilograms. The kolkhoz has fulfilled its five-year plan for the sale of grain and milk to the state and it has increased its meat deliveries twofold. Labor productivity on the farm has increased by 48 percent.

In behalf of the general introduction of the valuable experience accumulated at the Kazminskiy Kolkhoz, the kray CPSU committee and the rayon party committees carried out a great amount of explanatory work. This question was examined during sessions of the bureau of the kray committee, at plenums of the party committees and at meetings for communists in the primary party organizations. The first order of business is to ensure that each leader, specialist and agricultural worker has a good understanding of the essence of the problem and the role he is to play in solving it. Seminars were conducted for the 1st secretaries of rayon party committees, the chairmen of rayon executive committees and RAPO councils and kolkhoz and sovkhoz leaders for the purpose of studying the valuable experience accumulated. They became convinced with their own eyes that the branch structure of control and the enlarged crop rotation plans are opening up great prospects and that the traditional form of labor organization -- all-round brigades and small crop rotation plans -- is restraining in its clutches, if it can be expressed in this manner, both intensification and improvements in production efficiency. Intra-farm specialization and concentration, in keeping with the experience of a leading farm, are raising the responsibility of the specialists, making their work more purposeful and placing in their hands the levers for economic managerial methods.

As a result of the efforts put forth by the rayon party committees, party organizations, RAPO councils and farm leaders and specialists, the branch control structure and enlarged crop rotation plans have been introduced into operations at two thirds of the kray's kolkhozes and sovkhozes. In addition, field crop husbandry, feed production and livestock husbandry have been formed into cost accounting branches.

The kray, oblast and rayon party committees are constantly directing the work of the councils of agroindustrial associations towards the consistent introduction of cost accounting procedures. Many obstacles are to be found along this path. For example, the prices for products do not always compensate for the expenses required for their production and they reduce to zero the stimulating forces of cost accounting. In accordance with a recommendation by the kray party committee, the council of the kray agroprom carried out a differentiation of prices. Towards this end and taking into account the natural climatic conditions and the locations involved, the kray's rayons were divided up into three price zones and the farms -- into seven price sub-groups. Objective opportunities were thus created allowing all farms to carry out profitable production operations and this raised the responsibility of leaders and specialists for zealous management. The demands being imposed by the party committees on the personnel with regard to production efficiency became more objective in nature.

Our cost accounting operations serve as a method for actively assisting agricultural workers in mobilizing the available reserves and opportunities, uncovering their best creative forces and using them for increasing output production and improving production efficiency. The solving of this task is also being promoted by the collective contract. It is creating conditions for raising labor productivity and lowering production costs, it is stimulating the development of genuine cost accounting operations, it is aiding in the display of creative capabilities and it is making earnings dependent upon the quantity and quality of labor.

In the interest of disseminating this leading method and acting upon the initiative displayed by the kray party committee, group conferences on the introduction of the collective contract based upon cost accounting procedures were held for the chiefs of the planning departments of rayon agricultural administrations and the chief economists of kolkhozes and sovkhozes. A specially created committee develops detailed recommendations for each branch of agriculture. Materials were published containing a summary of experience already accumulated in the kray in connection with the introduction of the contract and cost accounting operations. Special attention was given in these materials to motivating the leaders and specialists into finding a solution for this most important national economic task. Actually, some of them did not favor the new forms for labor organization and wages and they did not wish to use the economic methods of management. And the chief reason for this derived from the fact that the earnings of a specialist were not always directly dependent upon the final result.

The measures adopted by the party committees facilitated to a large degree the tasks of the rayon agroindustrial associations with regard to the extensive introduction of the collective contract. Eighty nine percent of the livestock husbandry and 84 percent of the field crop husbandry subunits are now operating on the basis of its principles. Successful forms have been found for increasing use of the collective contract by specialists and by the entire administrative apparatus of farms. For example, the administrative-managerial personnel at the Pravda Kolkhoz in Petrovskiy Rayon rejected one-time bonuses for having over-fulfilled their plans for some crops. The production commanders and technologists are now being awarded bonuses from a common material incentive fund, the amounts of which are dependent upon the net income of the kolkhoz. The fulfillment of contractual obligations in behalf of contractual collectives is taken into account in a very strict manner when computing the bonuses.

Analysis reveals that the production indicators in contractual collectives are considerably higher than those for conventional collectives. But the educational role played by a collective contract cannot be measured in terms of arithmetical values. A common desire to improve the final results serves to raise the interest of each member of a collective in the work being performed by his comrades and it strengthens both collaboration and mutual assistance among people.

On the one hand, the further development of production specialization within agroindustrial associations intensifies the division of labor and, on the other, based upon mutual advantage, it strengthens the relationships with partners. The party committees direct the attention of the RAPO councils to the

development of just such mutually advantageous relationships as the elimination of inter-branch isolation. Fine results are being achieved from cooperation among partners in Georgiyevskiy, Petrovskiy, Novoaleksandrovskiy, Blagodarnenskiy and a number of other rayons. Special attention is being given here to improving services and logistical supply for the farms and everything is being done to ensure more complete control over their financial relationships and mutual accounts with partners. For example, the RAPO councils have achieved a situation wherein not all of the funds are immediately made available to the kolkhozes and sovkhoses, but rather a complete accounting is carried out only after the crops have been harvested, by which time the final result is known and the contributions by the partners have been established.

The development of direct relationships promotes unity among the partners and it serves to strengthen the economies of the kray's kolkhozes and sovkhoses. At the present time, the processing enterprises are accepting more than 81 percent of the milk directly at the kolkhozes and sovkhoses. More than 66 percent of the livestock are being delivered to the meat combines by means of centralized transport. And the Nevinnomyssk Wool Combine has established direct relationships with all of the sheep raising farms.

What is this providing? First of all, high quality products. Based upon last year's results alone, the farms received more than 80 million additional rubles from the delivery of first grade milk, the sale of livestock in a raised state of nourishment and from the delivery of 1st class wool. Thus the party committees, in the face of these notable results, are persistently orienting the RAPO councils towards the further strengthening of direct relationships and the development of business-like collaboration among partners.

One of our most important tasks is that of raising backward farms (and there are still many of them throughout the kray) to a complete self-repayment basis and to ensure that they fulfill their state plans and obligations. Today each kolkhoz and sovkhos is able to increase its production of goods, earn funds, raise profitability and reduce expenditures.

It bears mentioning that recently the effect on the status of affairs on backward farms has become more appreciable and effective. The reasons for farms falling behind have been studied carefully throughout the kray. It has become clear: in order to rescue them from their problem, one group of kolkhozes and sovkhoses must be furnished with assistance in strengthening the logistical base, another group -- assistance in social development and in the training and retention of personnel in the mass professions and for a third group there is an obvious need for improving management in the form of experienced and industrious personnel.

In this regard, the kray party committee and the kray executive committee undertook measures aimed at accelerating the construction of housing and projects of a social-domestic and cultural nature at kolkhozes and sovkhoses throughout the kray. This made it possible to stabilize the labor collectives of the farms, particularly the backward ones, and to retain the youth in the villages.

We are devoting special attention to the backward farms by providing them with capital investments, equipment and fertilizer. The kray, oblast and rayon



party committees are assigning experienced workers to these farms. The chairman of the Novoaleksandrovskiy Rayon Executive Committee V.K. Borodenko took over as head of the Kolkhoz imeni Lenin. The deputy chairman of the kray Selkhoztekhnika Association V.F. Pristup became the director of the Voskhod Sovkhoz in Kochubeyevskiy Rayon. Many such examples could be cited.

By persistently improving the operational style and methods of all subunits of the agroindustrial complex, the party committees are striving in every possible way to improve the role being played by the specialists in the interest of their providing more practical assistance in the various areas. In the kray agricultural administration, for example, a group has been created for the purpose of introducing industrial methods for the growing of sugar beets. It is headed by an experienced agronomist, Ya.Ye. Zyabkin. This group is teaching the leading agricultural methods in a knowledgeable manner, it is aiding the mechanized teams and detachments in forming the required complex of machines and agricultural implements and it is correctly organizing labor and wages. As a result, an acceleration has taken place in the process of concentrating the sugar beet sowings, permanent teams and detachments of beet growers have been created and more extensive use is being made of material incentive measures in the interest of achieving high final results. As a result, the yields and the gross production of sugar beets are increasing from year to year throughout the kray.

A group has been created in the kray agricultural administration for the purpose of introducing an industrial technology for the cultivation of corn.

The kray party committee is attempting to ensure that this same specific work is carried out by specialists of the kray and rayon agricultural administrations in other areas of production.

At the same time, we are requiring the oblast and rayon party committees to carry out in a steadfast manner the aim of the CPSU Central Committee with regard to a more effective limitation being placed upon the functions of the party, soviet and economic organs: they must not tolerate substitutes for the agroindustrial associations or by-pass them in solving economic problems and they must not concern themselves with problems which fall within the competence of the farm specialists and leaders, which as is well known brings about a reduction in the responsibility of personnel for their assigned tasks. At the present time, incidents appear as an anachronism when the rayon party committee points out what must be done and when it must be done in a field or on a farm.

The kray, oblast and rayon party committees have at the present time reduced to a minimum the various types of conferences and meetings as they strive to avoid disrupting farm leaders and specialists from their primary obligations. However, there is still a considerable amount of work to be carried out in this area. Just as in the past, the flow of papers, circulars, reports and summaries impedes live work. Here everything does not depend only upon ourselves. The administrative apparatus of the agroindustrial complex continues to remain cumbersome. It is our opinion that we can reduce its size throughout the kray by not less than one third. But this is possible only if the staff of the central departments is also reduced in size, since today there must be a department in the kray agricultural administration and in the RAPO



for each main administration of the ministry, with the purpose of this department being to receive the papers and furnish responses to them.

I already mentioned this during the All-Union Economic Conference on Problems of the Agroindustrial Complex. I wish to emphasize once again that excessive support, detailing of plans, requirements and numerous reports are unacceptable and cause great harm to the work. Actually, today each farm annually presents more than 5,000 reports and types of information at various levels. The specialists believe that the volume of information and reports can be reduced painlessly by a factor of 2-3.

In this regard, we believe that a more decisive change should be carried out over to the normative methods for planning and evaluating the work of kolkhozes and sovkhozes on the basis of their final and not intermediate results. Such an approach creates favorable conditions for the formation of economic thought, for developing the creative initiative of leaders and for objectively evaluating the work of labor collectives. In the process, an opportunity will appear for simplifying administration and for reducing expenses for the maintenance of administrative personnel. The APK [agroindustrial complex], as defined during the May (1982) Plenum of the CPSU Central Committee, must be planned, financed and administered as a unified whole. The RAPO councils have been presented with great opportunities for developing and strengthening the inter-farm relationships of partners. Mutual interest in achieving high final results and the economic advantage to be realized from this must become a binding force.

Based upon tremendous assistance from the party's Central Committee and the government, the agricultural workers in Stavropol Kray fulfilled their four year plans for selling the principal types of agricultural products to the state. In accordance with the results of the all-union socialist competition, the kray, five rural rayons and nine kolkhozes and sovkhozes were awarded challenge red banners of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee.

At the same time, the party committees are aware that use is not being made of all available reserves for increasing the production of field crop husbandry and livestock husbandry products or for raising agricultural efficiency. During a recent plenum of the kray party committee, a discussion took place on measures aimed at carrying out the decisions of the April (1985) Plenum of the CPSU Central Committee and Predgornyy Rayon was criticized. Over the past 4 years, the kolkhozes and sovkhozes here lowered the grain yield by 3 quintals per hectare. The work was affected by numerous agrotechnical mistakes. This brought about a reduction in the gross grain crop yields in Georgiyevskiy Rayon and in the Karachayevo-Cherkess Autonomous Oblast. The fallow tracts were not used in a thrifty manner and the desired results were not achieved from the use of mineral fertilizers in Grachevskiy, Mineralovodskiy and Turkmenskiy rayons.

The insufficient effectiveness of irrigated areas is arousing special alarm. One fact stood out during the plenum of the kray party committee. Last year, 83 farms throughout the kray obtained less than 50 quintals of feed units per irrigated hectare.

The participants in the plenum criticized the kray agricultural administration and its chief I. Kablakhov and also the councils of a number of RAPO's for failing to devote adequate attention to analyzing the work of the kolkhozes and sovkhozes. In particular, many problems in organizing the work of the grain growers and livestock breeders were associated with this fact.

The kray's party committees and agricultural organs are searching for the means for eliminating existing shortcomings in the development of agricultural production, for further improving the economic mechanism and for strengthening cost accounting relationships. In the future we must develop business-like relationships among the APK partners, introduce the normative methods of planning on a more extensive scale and make better use of bonuses added on to the prices for agricultural products in the interest of smoothing out the economic conditions of management. All of this requires persistent and purposeful work on the part of the party committees.

The communists and all Stavropol workers are confronted by tense tasks concerned with further developing the kray's agroindustrial complex. They have accepted the decisions handed down during the April (1985) Plenum of the CPSU Central Committee as a spirited program of actions. And at the present time they are devoting all of their efforts towards making a worth contribution to the work of implementing the tasks advanced by our party and successfully fulfilling the plans for the final year of the five-year plan on the whole. This will be our labor gift to the next 27th CPSU Congress.

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## AGRO-ECONOMICS AND ORGANIZATION

### SEMENOV ON PROCUREMENT PRICING, PROFITABILITY

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[Article by V. N. Semenov, doctor of economic sciences, under the rubric "Towards the 27th CPSU Congress": "Strengthening the Economies of Kolkhozes and Sovkhozes"]

[Text] The USSR Food Program, developed in accordance with the decisions of the 26th CPSU Congress and approved by the May 1982 party plenum, ascribes great significance to improving the economies of low-profit and unprofitable kolkhozes and sovkhozes. As a result of unprofitable production of a number of agricultural products cost accounting has been minimized. In many enterprises, covering sovkhoz losses from the budget and postponing the payment of kolkhoz and sovkhoz debts on loans from USSR Gosbank did not provide a firm foundation for the development of a stable economy.

In accordance with the decisions of the May 1982 Plenum of the CC CPSU, procurement prices for agricultural products have been raised and supplements to these prices have been introduced for products sold to the state by low-profit kolkhozes, sovkhozes and other agricultural enterprises, equalling a sum total of 16 billion rubles per year. Moreover, procurement prices have been raised by another 5 billion rubles by means of the cancellation of budgetary compensation for increased wholesale prices of gasoline (since 1978), spare parts, and building and other materials (1982). Thus, procurement prices for agricultural products with supplements to them have been raised by a total of 21 billion rubles. According to estimates, the increase in procurement price plus supplements should have achieved a production profitability in kolkhozes and sovkhozes averaging 22 percent based on actual cost of agricultural products in 1979-1981. Here, naturally, in some union republics a variable level of profitability survived because procurement prices were increased only for unprofitable or low-profit items without decreases in prices for profitable items.

However, despite the growth in profitability of agricultural production, procurement prices could not ensure profitable operations for all sovkhozes and kolkhozes which are characterized by dissimilar natural-economic conditions. Among enterprises located within the same rayon, oblast or republic there were sharp differences in the cost of production as a result of dissimilar operating conditions and a different organization of production and

labor. In 1980-1982 half of kolkhozes and sovkhoses operated at a loss. The more meat, wool and milk they produced the greater the losses they bore. In connection with this it was essential to develop a mechanism that would facilitate the development of incentives for agricultural enterprises as concerns increasing production and the sale of products. It was possible to base this mechanism on differentiated procurement prices or on budget subsidies for the procurement of agricultural products.

The differentiation of procurement prices naturally creates the necessary prerequisites for reproduction in enterprises which are characterized by differing production conditions. This differentiation must be based on the point evaluation of land, on a consideration of availability of fixed capital and labor resources to the enterprise and on a consideration of production specialization. However, in addition, the level of profitability is no less affected by the organization of production and labor. For this reason, excessive differentiation of procurement prices is not contained within the framework of these conditions. In order to achieve equal production profitability it would be essential to create essentially individual procurement prices, which would represent a type of compromise with shortcomings in production organization in individual enterprises and with large losses and nonproductive expenditures. In such cases budget subsidies also would cover losses and nonproductive expenditures and they would be separated from direct production.

Supplements to procurement prices for agricultural products sold to the state by low-profit and unprofitable kolkhozes and sovkhoses were established for 1983-1985 with the goal of strengthening cost accounting in kolkhozes, sovkhoses and other agricultural enterprises and of strengthening their material interest in increasing production and in improving production quality. Total markups for individual types of products has been distributed in the following manner for the 1982 procurement plan (see Table 1).

Table 1		
Product	Total, millions of rubles	In % of total
Milk	2260	23.0
Livestock and poultry	5149	52.5
Wool	391	4.0
Grain	752	7.7
Sugar beets	240	2.5
Potatoes	160	1.6
Vegetables	200	2.0
Cotton	94	1.0
Flax and hemp	40	0.4
Other	529	5.3
Total	9815	100.0

First of all a determination was made of the conditions necessary for including kolkhozes and sovkhoses among the number of enterprises which are paid supplements to procurement prices for products that are sold to the state. This includes low-profit and unprofitable kolkhozes, sovkhoses and



other agricultural enterprises, regardless of departmental subordination, which are characterized by inferior natural-economic conditions, which sell agricultural products to the state in accordance with a plan of economic and social development and which usually have a profitability level of no more than 10 percent. Here profitability is calculated as the ratio of net income in kolkhozes and balance profits in sovkhoses and other state agricultural enterprises to the cost of products sold and of services. It is essential to note that in individual cases the list of low-profit and unprofitable enterprises includes enterprises which have a profitability level of more than 10 percent but which are not able to pay off bank loans or finance capital investments and other plan expenditures utilizing their own capital and which are characterized by a low level of fixed capital and a small profit (net income). The list also includes newly-organized enterprises with a plan productivity of up to 10 percent.

The list of low-profit and unprofitable enterprises can also include farms if, according to a decision by the council of ministers of the union republic, it is planned to increase production profitability of low-profit and unprofitable kolkhozes and sovkhoses to a higher level than the planned average for the union republic as a whole by means of introducing supplements to procurement prices in oblasts which are characterized by a generally higher level of production development and by a higher economic level. Poultry factories, state fur farms and sovkhoses which have within them large state livestock raising complexes for fattening cattle and hogs are usually not included in the list of low-profit enterprises since they are supplied with concentrated feeds from state resources. This list likewise does not include hothouse combines, for which all conditions have been created for highly profitable work.

In each kolkhoz and sovkhos that is included on the list of low-profit and unprofitable enterprises estimates were developed for total profitability at procurement price levels established 1 January 1983 for the 1982 plan of sales of goods to the state and of services. Here the production cost of products sold was corrected for actual production cost in 1979-1981, for increased expenditures relating to increased wages resulting from the decisions of the May 1982 Plenum of the CPSU Central Committee, and for price increases resulting from the cancellation of compensation from the budget for the difference in the price of gasoline, spare parts and building and repair materials.

Thus, total profitability of kolkhozes and sovkhoses with the goal of including them in plans for the payment of supplements to procurement prices was determined, in practical terms, from actual average 1979-1981 production costs for products sold under the new conditions.

Rayon agroindustrial associations have also utilized estimated total profitability as the basis for determining total supplements to procurement prices needed to achieve profitable operations in kolkhozes and sovkhoses. Here councils of rayon agroindustrial associations should have achieved the elaboration and confirmation of plans of organizational-technical measures for 1983-1985 as regards decreasing production costs and increasing the effectiveness of agricultural production in low-profit and unprofitable



kolkhozes and sovkhoses by means of increasing the level of farming and livestock-raising management, of increasing the productivity of agricultural crops and animals, of strengthening the material-technical base of enterprises and of providing well-trained directors and specialists for these enterprises. Councils of rayon agroindustrial associations are obliged to annually examine and refine these plans with the goal of eliminating losses.

Lists of low-profit and unprofitable enterprises which are to receive supplements to procurement prices are confirmed by oblast agroindustrial associations. They also confirm the size of these supplements for individual types of products sold to the state for each enterprise within the limits set by the funds that have earmarked for this purpose. Allocations to the union republic for use as supplements to procurement prices are distributed to oblasts in accordance with the 1982 plan on product sales. Here supplements should not be higher than 75 percent of procurement price for each type of agricultural product with a consideration of bonuses and deductions for product quality (weight of livestock, quality of wool, grain of strong and durum wheats, quality of raw cotton and fine-fiber flax and so forth). For products for which seasonal procurement prices have been established, supplements to procurement prices usually are established in rubles per ton based on an estimate of average payments for these products.

Councils of rayon agroindustrial associations submit to the oblast association estimates on the need for capital to pay supplements to procurement prices within the limits of the allocated funds. Here the estimate foresees covering losses of enterprises characterized by poor natural-economic conditions that developed on the average in 1979-1981 and also increasing the profitability of unprofitable and low-profit enterprises in all oblasts of the union republic to approximately the same level. In this case supplements to procurement prices fulfill the function of differentiated procurement prices. In each enterprise factors that affect production productivity are determined. As a result of supplements, production conditions throughout the rayon, oblast, union republic and the country as a whole are realigned.

Supplements to procurement prices for low-profit and unprofitable kolkhozes and sovkhoses are established according to groups of enterprises and types of agricultural products. For example, in Vitebsk Oblast of the Belorussian SSR 491 of 573 enterprises have been divided in the following manner into groups according to profitability and the size of supplements to procurement prices (see Table 2).

An estimate of sum totals and the size of supplements to procurement prices is made on the basis of the procurement volume of agricultural products planned for 1982, with the exclusion of agricultural products sold via the kolkhoz market but included toward the fulfillment of state procurement plans, of breeding stock sold to workers and employees of sovkhoses or for public nutrition within the established limits as well as of eggs produced privately and used for incubation. Also excluded from the plan procurement volume is the delivery weight of young animals which are being sent to agricultural enterprises for further raising and fattening and which are not counted toward the fulfillment of the plan for the sale to livestock to the state by enterprises-shareholders if the corresponding weight is included in the sales

plan of the interfarm enterprise. In livestock-fattening enterprises supplements are calculated according to weight gain of cattle during fattening, pasturing and raising as foreseen by the 1982 plan.

Table 2

Number of Kolkhozes, Sovkhozes	Group accord- ing to Profit- ability	Profitability,%	Supplements to Procurement Prices, %				
			Milk	Beef	Pork	Lamb	Wool
12	1	over 10	15	25	--	--	--
39	2	5.1 to 10.0	15	30	40	--	--
58	3	0.1 to 5.0	5	45	50	75	75
80	4	0 to -5.0	25	45	55	75	75
70	5	-5.1 to -10.0	30	45	55	75	75
85	6	-10.1 to -15.0	35	55	55	75	75
56	7	-15.1 to -20.0	40	55	66	75	75
91	8	over -20.1	75	75	66	75	75

Thus, the estimate for calculating the size of supplements includes only those products which are sold to procurement organizations or processing enterprises and which are counted towards the fulfillment of the plan of sales to the state. In connection with this, naturally, the size of supplements increases per unit of production. As a result, the enterprise bears no losses since supplements are also paid out for products that are received and paid for by procurement and processing enterprises.

The establishment of supplements to procurement prices for individual kolkhozes and sovkhozes arises from the necessity to achieve reproduction in enterprises which are characterized by inferior natural-economic conditions. For this reason a consideration must be made of a complex of conditions which determine the economic and financial status of these enterprises. This is why in many republics, oblasts and krays when supplements to procurement prices are established a consideration is made of the point evaluation of land, the availability of fixed and turnover capital, the size of wages, bank debts and the need for funds to expand production in individual kolkhozes and sovkhozes. The approach taken in the Lithuanian SSR can serve as an example of how supplements to procurement prices are established with a consideration of a comprehensive evaluation of natural-economic conditions. Here a system of differentiated procurement prices was employed in the course of four five-year plans. The foundation for this system included an economic evaluation of the land and the availability of fixed capital and manpower. Initially this differentiation was implemented according to the territorial principle, and since 1970--according to four groupings of enterprises. The inclusion of enterprises in a particular group was carried out with a consideration of the natural-economic conditions of operations. Each region had enterprises

belonging to the different groups. As of 1 January 1983 five zones were created for the comprehensive evaluation of production conditions (see Table 3).

Table 3

	In republic as a whole	According to groups of enterprises				
		I	II	III	IV	V
Number of enterprises:						
until 1 January 1983	1042	257	190	211	384	--
after 1 January 1983	1042	219	169	206	329	119
Economic evaluation of the land in points	40	51	44	40	35	30
Overall evaluation of the land in points	100	120	102	96	88	76
Total profitability,%:						
actual	7.0	11.0	4.5	2.2	5.0	-5.9
with new procurement prices	16.0	27.0	17.1	9.6	8.2	-4.3
with price supplements	18.0	20.0	15.6	12.2	16.6	67

The first group includes kolkhozes and sovkhoses with a land evaluation of 51 points and an overall evaluation of 120 points; the fifth group--30 and 76 points respectively. The difference in the point evaluation of land and overall production conditions between groups comprises an average of 15-17 percent.

In accordance with the overall evaluation of production conditions, supplements to procurement prices have been established for agricultural products sold to the state by the republic's kolkhozes and sovkhoses. They equal the following amounts:

	Groups of enterprises				
	I	II	III	IV	V
Milk	--	2	4	6	8
Cattle	--	5	11	17	24
Hogs	--	5	13	21	31
Sheep	14	14	14	14	14

For the first group of kolkhozes and sovkhoses, with the highest point evaluation of land and production conditions, supplements to procurement prices are not established, except for sheep, even though the profitability level for this group equals 11 percent, and with new procurement prices--20 percent; moreover, some enterprises are unprofitable. Thus, with new procurement prices in Kyaturvalakyay Kolkhoz profitability should equal 8.1

percent with a land evaluation of 62.3 points and an overall production evaluation of 118 points. In Shakyay Sovkhoz with a land evaluation of 61.1 points and production conditions of 103.2 points losses reach 25.3 percent.

In the Estonian SSR as well as in the Lithuanian SSR uniform procurement prices have been established throughout the republic. Production profitability is regulated by means of a system of supplements to procurement prices.

To determine the size of supplements for 156 sovkhoses and 143 kolkhoses in the republic an operations coefficient, which was calculated according to the following ratios (indicators), was utilized:

--average profitability of the enterprise in 1979-1981 to average profitability within the republic;

--the quality index of every kolkhoz and sovkhos to the average quality index for the republic;

--availability in enterprises of fixed capital per 100 hectares of agricultural lands to average availability per 100 hectares within the republic in 1981;

--gross production output per agricultural worker to average output in the republic;

--the number of workers per 100 hectares of agricultural lands to the average indicator in the republic in 1981.

Within the republic 45 sovkhoses and 15 kolkhoses were characterized by an operations coefficient of less than average. As a result, the list for receiving supplements to procurement prices includes 16 unprofitable enterprises, 26 enterprises with a profitability of up to 10 percent and 18 with a profitability of over 10 percent. Uniform supplements in the following amounts have been established for all of them: for first grade milk with a base butterfat content--30 percent; for cattle in the best nutritional state--30 percent and in an average nutritional state--27 percent; and for flax straw of the highest sizes--75 percent. Consequently, supplements to procurement prices stimulate the production and procurement of high-quality products.

Nevertheless, with such an approach to establishing supplements to procurement prices that considers the level of operations, supplements are also received by highly profitable enterprises such as Tani Sovkhoz. With a profitability level of 21 percent it is included on the list for receiving supplements. If supplements are considered, the production profitability of this enterprise is placed at 38 percent.

A depressed profitability does not create the necessary conditions for expanded reproduction, whereas an elevated profitability resulting from the establishment of supplements does not provide incentives for decreasing production costs and expenditures for the production of agricultural products. This is why it is essential to accept an economically-based approach toward establishing supplements for low-profit and unprofitable enterprises with a



consideration of natural-economic conditions, a point evaluation of land and other production conditions. In the given case supplements to procurement prices are directed at the elimination of differences in production conditions which are not dependent on specific enterprises.

In the Lithuanian SSR the wages of kolkhoz farmers are also considered in the category of overall production conditions to determine the size of supplements to procurement prices. In the Armenian SSR supplements to prices for kolkhozes are established after a correction of profitability for wages--with high wages profitability increases and with low wages it decreases.

Councils of ministers of union republics not having oblast divisions and kray executive committees confirm supplements to procurement prices for agricultural products for groups of low-profit and unprofitable kolkhozes and sovkhoses or for individual enterprises and types of agricultural products. These supplements reach as far as rayon agroindustrial associations, associations, and procurement, processing, trade and other enterprises and organizations which are located within the union republic or kray. Excerpts from decisions of the republic's council of ministers or the oblast executive committee have the same significance as the current procurement price lists. If the kolkhoz or sovkhos sells agricultural products to procurement, trade, processing and other organizations located within the union republic or oblast, the farm supplies these enterprises and organizations with an excerpt from the decisions of the council of ministers of the union republic or the oblast executive committee, certified by the rayon executive committee, concerning the size of the addition to procurement prices established for the farm.

Supplements to procurement prices are paid out to low-profit and unprofitable enterprises by procurement, processing, trade and other enterprises and organizations which carry out procurement for products that are received and counted towards the fulfillment of the plan of sales to the state. Here supplements are not paid out to kolkhozes and sovkhoses for products sold at kolkhoz markets or to sovkhos workers and employees and used for the purpose of public nutrition, for breeding stock and for eggs produced privately and used for the purpose of incubation, although these products are included in the plan for the sale of products to the state. Supplements are not paid for the delivery weight of livestock being transferred to interfarm enterprises-participants when this weight is not included in the fulfillment of the plans of these enterprises-participants.

Consequently, supplements are paid only for products received by procurement, trade and processing enterprises which carry out direct procurement of these products and which pay for them according to procurement prices. The only exceptions are products sold according to retail prices to the trade network, sanatoriums and to children's and other institutions by kolkhozes and sovkhoses and credited to the procurement plan. But in this case kolkhozes and sovkhoses are reimbursed from the budget for the difference between procurement and retail prices. As a result, supplements to procurement prices are paid out.



Supplements are paid to enterprises of procurement and processing enterprises and organizations simultaneously with settlements for products sold according to procurement prices. For this purpose, the following indicators have been introduced in receipts, records and other accounts documents used for products supplied by low-profit and unprofitable enterprises: percent of supplement, cost of production according to procurement prices with a consideration of bonuses and deductions for quality, and total supplements. Here cost according to procurement price is based on a sum that does not include payments for the drying, cleaning and processing of grains and oil-bearing crops, raw cotton and other products as well as 50-percent supplements to procurement prices paid for the sale to the state of agricultural products above the average level achieved during the 10th Five-Year Plan. Supplements for quality are not included in procurement prices for quality seed of grain crops.

Procurement organizations and processing enterprises pay kolkhozes and sovkhoses supplements to procurement prices according to the procedures for clearing simultaneously with payment for products by means of credit extended to them from a special loan account. Accounts for products received are carried out with enterprises according to clearing procedures or payment commissions by means of enumerating sums added to them in accounts on the day of receipt. If the procurement or processing enterprise is located outside the service area of the bank's service institutions then estimates must be made with a consideration of the status of communications but no more infrequently than once every 5 days.

Special loan accounts of procurement organizations used to pay for agricultural products sold by kolkhozes and sovkhoses are not restricted by credit limits. Payments for products are also not limited by the status of the finance enterprise of either procurement organizations or kolkhozes and sovkhoses or by their bank debts related to production expenditures and capital investments.

A somewhat different procedure for paying supplements has been established for low-profit kolkhozes and sovkhoses selling their products directly, including deliveries into the general union fund. In cases in which these enterprises sell agricultural products directly to the trade network, sanatoriums and children's and other institutions with credit towards fulfillment of the procurement plan and with reimbursement to these enterprises for the difference between procurement and retail prices, the payment of the supplement is carried out by Gosbank institutions using a special open account. For this purpose enterprises-suppliers submit to the bank institution a certificate which indicates the purchasers, payment documentation, the amount of production sold in recorded weight, the cost of the product and the size of the supplement.

This is the procedure used by Gosbank institutions to pay out supplements to procurement prices for livestock, poultry and eggs delivered to biofactories and biocombines for the purpose of producing biological preparations, with the inclusion of these preparations in the fulfillment of plan sales to the state. In this case, biofactories and biocombines pay for livestock, poultry and eggs

bought from low-profit and unprofitable enterprises according to procurement prices and without the supplements established for these enterprises.

It is essential to note that with the sale of agricultural products outside the borders of the oblast, kray or autonomous republic, but within the union republic, the payment of supplements to procurement prices to low-profit and unprofitable kolkhozes and sovkhozes is carried out by procurement organizations and processing enterprises. When agricultural products are sold outside the union republic, including delivery into the general union fund, supplements are paid by bank institutions in the supplying enterprise's area using a special open account, since allocations for reimbursing supplements are established for union republics for the procurement plan involving agricultural products.

Supplements are paid out according to the regular procedure to interfarm enterprises having a procurement plan involving agricultural products. Nevertheless, supplements to procurement prices for products sold by the interfarm enterprise as well as by the kolkhoz or sovkhoz which is fulfilling the functions of the interfarm enterprises and credited to the fulfillment of the procurement plan involving agricultural products of low-profit or unprofitable enterprises-cooperative participants are paid by procurers directly to the low-profit or unprofitable enterprise-cooperative participant.

In interfarm enterprises which implement the procurement and fattening of livestock in fulfillment of procurement plans of livestock raising enterprises-cooperative participants, the payment of supplements to procurement prices to low-profit and unprofitable enterprises is implemented by the procurement organization. For this purpose, the interfarm enterprise supplies the procurement organization or processing enterprise with a record and detailed breakdown for the payment of supplements to unprofitable enterprises.

The state budgets of union republics annually earmark 9.8 billion rubles for supplements to procurement prices to cover the products sold to the state by low-profit and unprofitable enterprises. Procurement organizations and processing enterprises are reimbursed for supplements to procurement prices they pay out from a special account drawn on this allocation. In order to reimburse enterprises for the supplements they have paid out, twice monthly procurement organizations submit to bank institutions information on low-profit kolkhozes and sovkhozes and on total supplements with the directives of files or payment commissions which are used as the basis for making the supplementary payments.

Gosbank institutions transfer liabilities from a special loan account to the oblast bank office. In turn, oblast offices transfer bank loan liabilities related to the payment of supplements within the oblast as a whole to the republic offices, which provide monthly reports to the ministries of finance of union republics concerning sum totals paid. The ministries of finance of union republics pay off existing USSR Gosbank loans related to the payment of supplements to procurement prices by means of allocations foreseen in the republic's budget. Debts to Gosbank related to the payment of supplements for

December of the preceding year are reimbursed by means of terminal turn-around, i.e. by means of the preceding year's allocations.

Thus, supplements to procurement prices for products sold to the state by low-profit and unprofitable kolkhozes and sovkhoses are paid out using Gosbank credit. The finance ministries of union republics pay off loan debts created from the payment of supplements in a centralized manner using budget allocations planned for in the budgets of union republics. Allocations made for this purpose that are not utilized in the course of the year are not closed but instead are transferred to the following year for the purpose of paying out supplements to prices. Consequently, these allocations have a strictly goal-oriented purpose.

The existing procedure for paying out supplements interests kolkhozes and sovkhoses in increasing the production and sale to the state of agricultural products. These supplements must be earned. The mechanism for paying out supplements is not restricted by credit limits and by the status of indebtedness of procurement organizations as regards Gosbank loans; the interaction of credit and budget allocations has been achieved. But at the same time supplements to procurement prices are temporary in nature. As the economy of agricultural enterprises becomes stronger, the payment of supplements will naturally cease.

To a considerable degree, the establishment of supplements to procurement prices has helped to improve the effectiveness of utilizing allocations earmarked for strengthening the economic status of low-profit kolkhozes and sovkhoses. These supplements became the instrument for equalizing the levels of productivity of kolkhozes and sovkhoses characterized by dissimilar natural-economic conditions. Supplements are paid for products. The larger the quantity of products sold by a kolkhos or sovkhos the greater the sum of supplements it receives. Here the interests of the enterprise and of the state coincide.

Russa Sovkhos of the Estonian SSR fulfilled its 1984 plan for the sale of milk to the state by 109.8 percent and received a price supplement of 206,000 rubles, or 24,000 rubles more than planned. Sovkhos imeni 22 Partsyezd of Tselinograd Oblast, Kazakh SSR, was short 210,000 rubles in supplements to procurement prices as a result of selling the state 4,336 lean sheep and 1,870 sheep below average levels in terms of nutritional state (of 6,490 sold).

Supplements to procurement prices are reflected in the results of activities of enterprises and serve as the source for expanding production and for forming funds of economic stimulation.

As a result of the introduction of supplements to procurement prices previously unprofitable kolkhozes and sovkhoses became primarily profitable enterprises. Here many kolkhozes and sovkhoses included on the list of low-profit enterprises for the purpose of receiving supplements to procurement prices have achieved a high level of profitability. A number of enterprises are able to carry out reproduction without supplements to procurement prices.

Let us give some characteristic examples in this regard. In 1984 Kavkaz Kolkhoz of Krasnodar Kray received 185,000 rubles of procurement price supplements with a profit of about 1.6 million rubles. Production profitability comprised 27.4 percent. In Varstu Sovkhoz of the Estonian SSR production profitability equalled 42.4 percent, and in Lyumanda Sovkhoz of the same republic--48.5 percent. Production profitability in these sovkhozes, without a consideration of supplements to procurement prices, was determined to be 27 and 26.2 percent respectively.

Increased profitability undoubtedly occurred in many kolkhozes and sovkhozes by means of the implementation of organizational measures to improve production and labor organization and to utilize agricultural equipment and mineral and organic fertilizers more effectively. At the same time a high level of production profitability is not a stimulus for decreasing the cost of agricultural production.

In 1984 in the RSFSR and the Kirghiz SSR there was an examination of lists of low-profit kolkhozes and sovkhozes receiving supplements to procurement prices. Meanwhile, in a number of union republics total supplementary payments exceed allocations made for this purpose. Here they do not correspond to the pace for fulfilling the procurement plan involving agricultural products. This type of situation is the result of shortcomings in creating a list of low-profit enterprises and in establishing supplements, as well as in records on the fulfillment by kolkhozes and sovkhozes of plans for milk and meat procured by these enterprises from kolkhoz farmers and sovkhoz workers according to contractual agreements.

Supplements to procurement prices are temporary in nature. They were established only for 1983-1985. In connection with this a serious problem arises with regard to achieving a profitability level in agricultural production that corresponds to the planned pace of procurement of agricultural products during the 12th Five-Year Plan. With a consideration of supplements, in 1983 the profitability of kolkhoz and sovkhoz production equalled 22 percent, and in 1984--19 percent. In 1983 kolkhozes, sovkhozes and interfarm enterprises produced 24.5 billion rubles in profits; in 1984--20.6 billion rubles. If supplements to procurement prices were to be abolished, the profits of agricultural enterprises would decrease by 10.4 billion rubles. The number of unprofitable kolkhozes and sovkhozes would increase sharply.

Despite the increase in procurement price and the establishment of supplements to them, in 1983 13 percent of kolkhozes and sovkhozes were unprofitable, and in 1984 their number increased to 18 percent. This attests to the fact that not all kolkhozes and sovkhozes have mobilized existing reserves for decreasing the cost of agricultural production and have not carried out the necessary measures to curtail nonproduction expenditures and losses. In many of them measures to improve the organization of production and labor were formal in nature. For this reason, in most enterprises profits are achieved primarily by means of increasing procurement prices and supplements to them.

Taking into consideration the fact that an improvement in production with the goal of improving the economic status of agricultural enterprises is integrally related to strengthening the material-technical base of



agriculture, with progress in the breeding of plants and animals and with research on new forms and methods of strengthening financial-credit influence on improving the operations of kolkhozes and sovkhozes, it would evidently be expedient to retain for the next few years the supplements to procurement prices for products sold to the state by low-profit enterprises or to establish specific-function financing of plan expenditures.

In 1986 supplements to procurement prices for low-profit kolkhozes and sovkhozes will be paid out in amounts that have been established. At the same time, in creating new procurement prices for the 12th Five-Year Plan corresponding work must be carried out to establish the size of supplements as well as to improve payment procedures.

Examinations made by financial organs have revealed serious shortcomings in the payment of supplements to procurement prices. For example, Gusyatskiy Interfarm Enterprise for the Raising and Fattening of Cattle in Ternopol Oblast did not submit records and a detailed breakdown on the payment of procurement price supplements for beef sold to Chortkovskiy Meat Combine in fulfillment of the plan of cooperative enterprises. As a result, in 1983-1984 and in the first quarter of 1985 Kolkhoz imeni 22 Syezd KPSS was short 65,600 rubles of supplements to procurement prices. Kolkhoz imeni Kirov, Vinnitsa Oblast, was unnecessarily paid 34,800 rubles in supplements to retail prices instead of procurement prices for eggs sold in 1983-1984 through the trade network.

There are also cases of improper establishment of supplements to procurement prices, as a result of which enterprises either receive too few or too many of the planned sums. Moskva Sovkhoz of the Kirghiz SSR fulfilled the plan of milk sales to the state by 83.4 percent in 1984, but received a price supplement of 133.6 percent of the plan, or 135,900 rubles more. Ak-Suu Sovkhoz of this same republic overfulfilled the plan for milk sales by 14 percent, but received supplements of 178.2 percent of the plan.

In the course of revisions and examinations carried out by financial organs the revelation of shortcomings in establishing supplements to procurement prices have been eliminated; kolkhozes and sovkhozes have been reimbursed for underpaid supplements and sums that were improperly paid out have been returned to the budget. Standing before financial organs are great and responsible tasks related to increasing the effectiveness of utilizing kolkhoz and sovkhoz profits obtained from supplements to procurement prices for agricultural products sold to the state. It is essential to improve control and economic work, to make specific proposals to local agricultural organs regarding nonproduction losses and expenditures and decreasing the cost of production and increasing the profitability of agricultural production. Kolkhozes and sovkhozes should be given help in establishing bookkeeping accounts and in organizing intraenterprise accounts.

In establishing supplements to procurement prices for low-profit kolkhozes and sovkhozes we must take into consideration existing reserves for increasing production profitability and for decreasing nonproduction expenditures and losses, as indicated by the decisions of the April 1985 Plenum of the CPSU Central Committee. Supplements to procurement prices are temporary in nature.



They must equalize the level of income of enterprises located in dissimilar natural-economic conditions. By carrying out organizational measures and strengthening the material-technical base, kolkhozes and sovkhozes have the opportunity to work profitably and by means of the successful implementation of the Food Program to worthily greet the 27th CPSU Congress.

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## AGRO-ECONOMICS AND ORGANIZATION

## ESTONIAN, GEORGIAN APK DEVELOPMENT ASSESSED

Tallinn SOVETSKAYA ESTONIYA in Russian 10 Sep 85 p 2

[Article by V. Somov: "A Lesson For Tomorrow, or, How the AgroIndustrial Complex Should Develop"]

[Text/ To administer, plan and finance the agroindustrial complex as a single entity at all levels -- such was the task assigned during the April (1985) Plenum of the CPSU Central Committee. How can this be achieved? It can be achieved by concentrating the efforts of the APK [agroindustrial complex] partners and by reorganizing the administrative and economic mechanism. Accumulated experience testifies to the advantages to be realized from such reorganization. In Georgia, a state committee for agricultural production which was created based upon the abolished Minselkhoz [Ministry of Agriculture/Minvodkhoz [Ministry of Land Reclamation and Water Resources/ and the republic's Goskomselkhoztekhnika has been in operation for 3 years and in Estonia for the same number of years there is the republic Agroprom Association that includes similar departments. Our account deals with their formation, problems and prospects for development.

The departments were eliminated. This was a serious breakdown. But indeed the technical and land reclamation services remained in the rural areas. Why then were the ministries abolished? Could it be that they were the principal hindrance with regard to the development of the APK?

"Yes, this was true. The departmental isolation of the agroindustrial complex," stated the chairman of the State Committee for Agricultural Production for the Georgian SSR G. Mgeladze "caused direct harm to the problem. Owing to the fact that the reorganization of the APK at the "upper stages" was never completed, the rayon agroindustrial associations did not succeed in mastering the situation. Indeed, the administrative chain was disrupted."

Truly, the partners of the agricultural workers, even under the RAPO conditions, retained their departmental dependence and, just as in the past, were chiefly occupied in solving their own problems, which by no means always coincided with the interests of the farmers. What happened? On the farms there were tens of thousands of machines. And all of the resources required for maintaining them in a state of readiness were in the hands of Selkhoztekhnika. But its chief concern was only plans for commodity turnover and the repair volumes. And the degree of readiness of the machines on the farms and the harvests gathered in with their aid were not the responsibility of Selkhoztekhnika and thus it

was not especially concerned over the quality of the repair work. And the land reclamation specialists were concerned only with the condition of the mainline canals. Whether or not the water reached the fields was not their concern.

And the RAPO's [rayon agroindustrial associations] struggled against the departmental barriers, without having any opportunity to exert influence upon the partners of the agricultural workers. Let us turn to the example of Vilyandiskiy Rayon in Estonia, where the republic's first rayon agroindustrial association (also one of the first in the country) was created 10 years ago.

The RAPO Council succeeded in organizing the work of all of the partners in a manner such that the repair workers, land reclamation specialists and agricultural chemists began to devote greater attention to the concerns of the farmers. And thus it was very vexing for the RAPO staff workers to have to recognize the inability of the association's council to solve many of the inter-branch problems, just as, in the past, the departments retained their own plans and their own channels for the use of resources and capital investments.

"Before long we became convinced that the following step had to be taken in agroindustrial integration," stated the chairman of the Vilyandiskiy RAPO Council Yu. Rakhula "to eliminate finally the inter-departmental boundary and to place in the same hands all of the logistical resources, capital investments, planning and financing."

And thus the barriers were eliminated and the republic's Agroprom Association created. What changes took place in the interrelationships among the APK partners and in the work of the RAPO?

"The collectives of repair workers and land reclamation specialists are now included in our association on a par with the kolkhozes and sovkhoses," continued Yu. Rakhula "there are no protectors 'on high.' All of the distribution functions are in the hands of the RAPO. The farm requirements are satisfied by the partners in a rapid and high quality manner. The inter-departmental problems have become intra-branch problems and thus they can be resolved more easily. Under these conditions, the RAPO is better able to concern itself with strategic matters.

Yes, within the framework of agroprom the branches lose their former independence. Life has shown that such independence led to isolation for the APK. Earlier, the partners did not have a separate office or administrative staff. The agricultural chemists, land reclamation specialists, transport and repair workers fended for themselves. And a farmer had to be able to get along with all of them, adapt himself to their requirements and spend a great amount of time reaching agreement with each one of them. In Estonia at the present time the service organizations in the rayons are combined in a single enterprise.

In Georgia, the composition of the forces of the partners took place in a different manner. For example, the former rayselkhoztekhnika organizations became repair workshops of the RAPO's. They also have been deprived of their former harmful luxury of dictating their conditions to the kolkhozes and sovkhoses. Now the workshops are carrying out the necessary work in accordance with the requirements of the association and the farms.

At first, there were some who attempted to follow the old methods. For example, Tsiteltskaroy'skiy Rayselkhoztekhnika wished to obtain money from one kolkhoz for services which were not rendered. Its plan went well. However, a check carried out by the RAPO revealed that the charge was excessive. Soon, both here and in other rayons, the RAPO's quite justifiably lowered the plans for capital repair work and this brought about an improvement.

There were no so-called forced repair operations carried out, wherein in behalf of a satisfactory entry in the Selkhoztekhnika account a tractor or combine is brought in for repair work prematurely. The repair workers now are concerned more for quality rather than for the volume of work carried out. Quality is their chief indicator.

The leaders of Agroprom and the State Committee for Agricultural Production made a correct judgment: the organizational reorganization will bring about very few changes in the relationships of partners if it is not followed by an economic reorganization. Indeed rayselkhoztekhnika will continue to be an unprofitable partner for the farmers if its operational methods are not changed. And these methods are largely dependent upon the established tasks.

Today the RAPO is assigning such tasks directly to the partners. They have in their hands the principal instrument for managing the agroindustrial complexes of rayons -- a plan. The service enterprises obtain it from the associations based upon requests from the farms. A kolkhoz or sovkhov is now authorized to make a selection -- to utilize the services of a partner or to carry out the work using its own resources, depending upon which method is most advantageous to it.

And is it advantageous to carry out repair work on a farm? This requires a strengthening of the repair base available at kolkhozes and sovkhovs and the organization of an efficient system for supplying them with the needed spare parts. This has been done in many rayons in both Estonia and Georgia. Moreover, it bears mentioning that this has helped to solve not only economic but also social problems. Here is what the chairman of the Estonian Khalinga Kolkhoz in Pyarnuskiy Rayon, L. Tamvere had to say:

"We built our own repair plant and capital parking areas for our machines. No longer do we have to turn to rayselkhoztekhnika for each little item. The quality of the repair work has improved and the expenditures for it have declined. In this manner we have ensured year-round employment for the machine operators. Approximately 200 former members of the kolkhoz have returned to work at the kolkhoz.

The majority of the Estonian farms can repair their equipment on site. With the aid of the RAPO's, they are introducing into operations on an extensive scale the unit-assembly repair method, wherein it is necessary only to replace the part which broke down. To dispatch equipment to specialized workshops as rarely as possible and to prevent tractors and combines from being transported across the entire republic -- such is the question being discussed in Agroprom and in the State Committee for Agricultural Production. True, not all of the farms are capable of creating a strong repair base. In such instances, they will receive assistance from their neighbors. For example, the repair workshops

of the Ingirskiy Tea Sovkhoz in Georgia willingly accept for work equipment sent to them from other farms in the rayon. They possess the capability required. In short, Selkhoztekhnika is now carrying out those types of work which the kolkhozes and sovkhozes are incapable of accomplishing or which are unprofitable for the farms. The task of creating an "anti-expenditure economic mechanism," as discussed during a meeting in the CPSU Central Committee on the problems concerned with accelerating scientific-technical progress, is being solved in this manner.

As you can see, the relationships between the farms and repair workers are undergoing serious changes. And what is new in the land reclamation service? Formerly, two departments were concerned with land restoration work in Estonia -- the State Committee for Land Reclamation and Water Resources and the republic's Selkhoztekhnika. At times, they duplicated and interfered in one another's work. It turned out that only one main administration was needed within the Agroprom structure, one which together with its subunits would be able to cope fully with the land reclamation affairs. And this with a considerable reduction in the administrative staff. At the present time, the land reclamation specialists are responsible for each restored hectare of land. In Georgia, for example, they are responsible for the operation of all intra-farm land reclamation systems.

Agroprom and the State Committee for Agricultural Production do not constitute simply an association of former departments. The organization, both in Georgia and Estonia, has been converted over to cost accounting and dozens of subunits have been abolished. The reorganization of the administrative and economic mechanism and the unified economic policy in the agroindustrial complex have broken down the departmental barriers, influenced the psychology of the personnel and forced all to display a common concern for the overall task.

However, further improvements are required in the APK organism created in Georgia and Estonia. It is sufficient to state that many partners of the agricultural workers (procurement specialists, processing workers, builders and others) still retain their departmental affiliation and their interests are still not in keeping with the needs of the kolkhozes and sovkhozes. Definite difficulties have also arisen over the fact that Agroprom and the State Committee for Agricultural Production are subordinate to three union departments, which are not always taken into account with the administrative peculiarities of the republic's APK.

Thus the diseases of growth are obviously inevitable. Nevertheless, the experience of these two republics in strengthening agroindustrial integration is of great importance. The new APK model, created vertically on a non-departmental basis, has been approved and has proven its worth. Thus the agroindustrial complex is becoming a single entity and all of the partners are genuine managers of the land.

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## AGRO-ECONOMICS AND ORGANIZATION

### INTEGRATION OF SCIENCE, TECHNOLOGY IN GEORGIAN APK VIEWED

Moscow SELSKAYA ZHIZN in Russian 29 Sep, 1 Oct 85

[Article by I. Gorlanov, special SELSKAYA ZHIZN correspondent: "The Georgian Version"]

[29 Sep 85 p 2]

[Text] In the Georgian SSR in the process of the structural reorganization of management of the agrarian sector of the economy, in the center and in localities, the integration of science with agricultural production has been developed further and a single "science-production" system is being formed, making it possible to speed up the movement of the achievements of science, technology and advanced experience to fields and farms.

The work on the acceleration of scientific and technical progress done in the republic is discussed in the published article.

#### Breaking Barriers

It is well known that those who work actively and boldly and follow the unbeaten path without timidity attain success more often. Individuals possessing such qualities have always been highly valued among the people and precisely they are capable of guiding others and being leaders. Here, however, it is not a matter of some individuals, but of an entire republic, where hundreds of thousands of people, closely interacting, conduct an active search for new ways and means of improving the management of the agroindustrial complex, increasing the efficiency of the scientific search and intensifying its effect on the solution of production and socioeconomic problems. Therefore, the value of such an innovation increases repeatedly.

Valerian Iosifovich Metreveli, chairman of the Presidium of the Transcaucasian Department of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], said that, when the experiment in the reorganization of management of the agroindustrial complex was begun in the republic, there were many skeptics. They were both among scientists and among practical workers.

However, quite a short time passed, only 2 years, and there were no skeptics.

The state of affairs in the republic's agrarian sector became very convincing. During 1983-1984 gross output increased by more than 13 percent and labor productivity rose by 13.5 percent. The total amount of kolkhoz and sovkhos profit increased 2.6-fold. This, despite the fact that repeated blows of the natural element did considerable damage to agriculture, especially to its leading sectors--viticulture and fruit growing.

What has been done specifically so that the management of the agrarian sector may become more rational and efficient?

Instead of three uncoordinated departments--the Ministry of Agriculture, the State Committee for Supply of Production Equipment for Agriculture and the Ministry of Land Reclamation and Water Resources--one was established, that is, the State Committee for Agricultural Production, which today competently performs all the functions of the sector's management. This was followed by significant changes in the rayon link as well. There it was necessary to break interdepartmental barriers. Former rayon agricultural equipment associations and administrations of land reclamation were reorganized into appropriate RAPO subdivisions (enterprises). Rayon administrations of agriculture were also abolished. A completely new model of RAPO was created. Their councils and the managerial staff competently manage all the services connected with agriculture: engineering-technical, transport, material and technical supply, construction, land reclamation, scientific and technical progress and others.

Thus, the previously created abnormal situation, in which the rayon agricultural equipment association and the administration of land reclamation, forming part of their departments, concentrated material resources, equipment and repair and supply bases at their places, which enabled them to dictate their conditions to kolkhozes and sovkhos and, at the same time, not to be responsible for the final results of agricultural production, was abolished. Now the RAPO independently uses all the capital investments and material and technical resources allocated for the rayon agrocomplex.

The results of work of the former rayon agricultural equipment association and now of enterprises for the repair and operation of the machine and tractor pool are evaluated according to the actual readiness of tractors and agricultural machines for operation on fields and farms.

For the purpose of more fully meeting the needs of production and procurement of field and farm products, the sector's transport services have also been reorganized. The system of centralized delivery of material and technical facilities directly to farms deserves special attention.

In brief, its essence lies in the fact that in accordance with the approved plan material and technical supply bases themselves deliver equipment and materials to farms. The significance of such a procedure is expressed not only in the fact that kolkhozes and sovkhos promptly receive the necessary resources, but also in the fact that a barrier is placed against an unproductive loss of work time by kolkhoz and sovkhos managers and specialists

on "extorting" them. Previously these losses were highly perceptible. For example, specialists of the Kartikamskiy Animal Husbandry Sovkhoz in Akhalkalakiy Rayon in 1981 spent 689 man-days on "getting hold" of various materials and in 1982, 585 man-days.

Of course, it was very important to solve the problem concerning into whose hands the reins of government should be transferred in order to skillfully use the means of production concentrated in RAPO. The role of the human factor, whose importance was stressed with special force at the April (1985) Plenum of the CPSU Central Committee, greatly rose in connection with the reorganization of management. Therefore, the republic party organization very carefully picked managerial personnel for RAPO, as well as for kolkhozes, sovkhoses and other APK organizations and enterprises. The most experienced specialists, who underwent good training in party, Soviet or economic work, including in the systems of the Central Committee of the Communist Party of Georgia and of the republic's Council of Ministers, were assigned to posts of chairmen of councils of agroindustrial associations. Today all chairmen of councils and leading RAPO specialists are people with higher education and many of them have academic degrees.

The sector's management was simplified considerably and became more efficient. The size of the managerial personnel was reduced by more than one-fifth. Expenditures on staff maintenance were lowered by almost 4 million rubles. The majority of the personnel relieved of office work (there were more than 800 such people in the system) switched to the production sphere--kolkhozes, sovkhoses and other RAPO enterprises.

I had occasion to talk with several specialists, who came from the rayon agricultural equipment association and the rayon water management department to work directly on farms. Not one of them was sorry that he had to leave the office. Conversely, they said that it became more interesting for them to work directly in production, because the results of labor were evident and, moreover, there were considerable advantages materially.

How was the structural reorganization reflected in the very process of the sector's management?

"In the most favorable way," G. D. Mgeladze, chairman of the Georgian SSR State Committee for Agricultural Production, confirms. "The main result lies in the fact that interdepartmental problems have been transformed into intrasectorial ones. When there was no longer a need for various kinds of agreements and coordinations during the solution of specific problems, it became easier and simpler to plan production and to use material-technical, financial and labor resources."

#### To the Field and Farm

The reorganization of management of the agrocomplex also made it possible to establish in the republic a single system of management of scientific and technical progress aimed at decisively turning science to the needs of public production and production, to science.

Beginning with the Central Committee of the Communist Party of Georgia coordinating councils for scientific and technical progress headed by first secretaries were established in all--oblast, city and rayon-- party committees. They determine the basic directions and system of measures for the development of scientific research and practical application of its achievements in the national economy.

All republic research and experimental institutions of agricultural specialization were placed under the authority of the Transcaucasian Department of VASKhNIL. It carries out both scientific-methodological and operational management of these institutions. Since the chairman of the presidium of this department, at the same time, is deputy chairman of the Georgian SSR State Committee for Agricultural Production, through him the staff subordinate to him also carries out the planning and financing of scientific research and its material and technical support. In connection with this in the committee itself it became superfluous to have an administration of science and propaganda. Scientific sections and divisions of the Presidium of the Transcaucasian Department of VASKhNIL undertook its functions. It acts as the organizer of introduction work.

With regard to the rayon link divisions for the introduction of the achievements of scientific and technical progress (two to four people in each division) were established in RAPO. On farms the responsibility for the introduction of innovations was placed on specialists.

The Institute of Design and Technological Planning and Economic Forecasting established on the basis of the former Institute of Scientific and Technical Information and Propaganda plays a very important role in the introduction system. This is quite a powerful institution capable of solving many problems connected with moving scientific and technical studies into production. The center for design and technological planning operating as part of the institute brings scientific and technical proposals up to specific design or planning solutions, which are then transmitted for practical mastering. Special attention is paid here to the development of plans connected with the reconstruction of old production premises (farms and so forth) for the application of new technologies.

The other important subdivision of the institute--the center for economic analysis and forecasting--studies the state of branches of the agrarian sector and works out forecasts of their further development. The efficiency of the studies proposed by institutes and the results of their practical application in production are also analyzed here. Experimental enterprises are also concentrated in the department of VASKhNIL, which makes it possible to more rapidly realize technical and technological innovations in finished models.

Two or three support-model farms are assigned in every rayon. They are the first to begin mastering them in production. Such rayons as Abashskiy, Gardabanskiy, Khobskiy and some others become distinctive testing areas of science. Overall programs for the practical mastering of the achievements of science, technology and advanced experience are carried out here. The very process of planning introduction work is also reorganized significantly.



Priority in this matter is given to kolkhozes and sovkhoses. Rayon and republic introduction plans are now drawn up with due regard for their orders for scientific and technical innovations, which they would like to apply.

For example, in Goriyskiy Rayon this year 55 scientific and technical innovations are being mastered, basically in horticulture--the rayon's leading economic sector.

Close cooperation with scientists made it possible to greatly increase fruit picking in kolkhoz and sovkhos orchards. In 1984 it averaged about 80 quintals per hectare as compared to 52 quintals in 1980. A total of more than 140,000 tons were picked.

The Goriyskoye Experimental Farm-Tekhnikum (A. P. Kacharava, director) of the Georgian Scientific Research Institute of Horticulture, Viticulture and Winemaking is the principal base of progress in the rayon's horticulture. Until recently the orchards of this farm were located only on 200 hectares and now, on 1,600. Where did the new areas come from? Cooperation helped. Four neighboring kolkhozes transferred unsuitable and previously fallow land (1,400 hectares) to the experimental farm for the establishment of industrial orchards and created the financial and material resources necessary for this on a share basis. Vast fruit plantations have now spread on this land.

Transferring the right to manage production on joint land to the experimental farm, kolkhozes as cooperative members receive a certain share of the profit from the sale of horticultural products. Furthermore, they are now able to concentrate their efforts on an intensive development of other sectors--vegetable raising and animal husbandry, whose efficiency is also growing. Thus, every cooperative member derives his benefit. Science also gains, because it gets the opportunity to carry out production checks of scientists' recommendations on a larger scale.

In addition to this, the Goriyskoye Experimental Farm, like many other similar institutions in the republic, serves as the center for the training of skilled workers for horticulture, holds seminars of kolkhoz and sovkhos specialists and trains fruit and vegetable agronomists and specialists in the storage and processing of fruits and vegetables at the tekhnikum. All this has become an integral component of the integration of science and production.

It is evident from everything that a single "science-production" system is being formed in the republic and its efficiency is becoming ever more noticeable. Whereas previously the economic benefit from the introduction of scientific and technical studies into agriculture was recorded within 10 to 12 million rubles annually, in 1984 it exceeded 60 million rubles. No less than 100 million rubles are expected to be received this year.

[1 Oct 85 p 2]

[Text] According to Partnership Contracts

Partnership contracts play a very important role in the development and strengthening of the relations of science with production in the republic.



The advantage of this form of integration lies in the fact that it is realized within the framework of the existing structure of scientific institutions, not breaking it. Partnership is based not on an organizational and legally formulated association, but on temporary interconnections, so long as the scientific and technical measures envisaged by the contract are fulfilled.

A very important detail: The contracting parties are responsible to each other for the fulfillment of obligations. For example, a scientific institution guarantees a farm the derivation of a certain economic benefit from the practical application of studies (the amount is indicated in the contract). The annual economic benefit is determined according to a single method and is calculated by partners jointly. In case of nonfulfillment by the scientific institution of its obligations the farm is reimbursed for the incurred loss. In turn, the farm, if the introduced study does not give the proper effect through its fault, reimburses the scientific institution for the amount of wages and expenses of its associates working on this farm.

In order to increase the interest of scientists and production workers in the most rapid economic mastering of scientific and technical innovations, appropriate legal norms of financing and material incentives have been developed. As a result of the economic benefit obtained from the introduction of innovations a special fund--the so-called partnership fund--is created in institutes. It is used basically for material incentives for scientific associates, as well as specialists, workers and managers of farms participating in the introduction.

A specific idea of this can be formed, using the Tavtavi (Kolos) Scientific Production Association as an example. This scientific production association was established in 1982 on the basis of the republic's Scientific Research Institute of Farming and High-Quality Seed Industry. Sixteen seed growing sovkhozes having 20,000 hectares of agricultural land formed part of it. The association is engaged in the selection and growing of seeds of corn, wheat, barley, kidney beans, soybeans, perennial grass and other annual crops. As managers of the State Committee for Agricultural Production maintain, today the association basically provides the republic's farms with seeds of high reproductions of these crops.

"We first concluded partnership contracts with farms in Khobskiy Rayon in the fall of 1982," M. B. Gvindzhiliya, general director of the scientific production association, reported. "For example, on the Chaladidskiy Sovkhoz the association's scientists and specialists ensured the application of industrial technologies of cultivation of corn, soybeans and kidney beans. Varieties and hybrids developed by the breeders of the scientific production association were sown. In 1983 the sovkhoz gathered 20 percent more soybeans, 15 percent more corn and 10 percent more kidney beans than, on the average, during the preceding 3 years. The additional income exceeded 188,000 rubles. The kolkhoz transferred 25 percent of this amount--47,000 rubles--to the scientific production association, one-half of which was spent there on awarding bonuses to scientific associates engaged in introduction work on the sovkhoz. The bonuses turned out to be quite substantial--1,000 and 1,500 rubles and more. For some the bonus was equal to their annual wages. The interest of scientists and specialists in introduction work increased

considerably."

In the republic there are more and more examples of the high efficiency of an active participation on the part of scientists in the solution of production, economic and social problems. For example, about 120 recommendations of science and advanced practice have been introduced in various branches of the agrarian sector in Gardabanskiy Rayon in recent years.

"The practical application of technical, technological and organizational innovations," Ts. I. Mosidze, candidate of agricultural sciences, chairman of the RAPO council, reported, "enabled the rayon's agrarian complex to increase gross output 1.6-fold in the last 4 years. Labor productivity in agriculture rose by 25 percent. Whereas in 1981 there were 17 unprofitable farms in the rayon, in 1984 only two such farms remained. This year there will be no unprofitable farms at all in the rayon."

An interesting and promising scientific and technical program is realized at the Krtsanisskiy Hog Breeding Complex (Candidate of Agricultural Sciences T. V. Chrelashvili, director). Many technical and technological innovations, which help to obtain more products, to improve their quality and to lower production expenses, were established there. In the last 4 years the production cost per quintal of weight gain in hogs was lowered by almost one-third.

The original waste-free production technology developed at the complex is of special interest. A central place in it belongs to the experimental shop for the processing of livestock runoff. N. G. Aleksidze, head of the Department of Biochemistry of Tbilisi State University, substantiated the original idea of its utilization. He now directs the work on its practical realization.

The main essence of waste utilization boils down to the fact that livestock runoff is divided into liquid and solid fractions. The liquid fraction is utilized for the fertilization and top dressing of crops, while solid fractions are subjected to special processing. One of them is used for the preparation of feed additives and the other, for the production of plastic articles. Such a practical realization of scientists' creative thought enables the farm not only to successfully solve the difficult problems of utilization of hog breeding waste, but also to obtain a valuable additive in hogs' rations and an additional income from the sale of products of the experimental shop. A real plant, where plastic planting pots and other articles are made from the semifinished products of this shop, has already been built nearby and has begun to operate.

"Another thing is also important," Tsezar Ivanovich Mosidze noted. "The closer contact between rural workers and scientists greatly increases their responsibility for the results of the common cause. The very thinking of workers is changing. They are more aware and have begun to fulfill production duties more knowledgeably. Their appearance is also changing for the better."

To Go Further

To be sure, it is very important to create an integral system connecting

science with production, which would serve as a good "viaduct" of scientific and technical innovations from institutes to fields and farms. However, the essence of the problem lies not only in how and where they should be introduced, but also in what should be introduced. The latter is of no lesser importance.

"In fact," V. I. Metreveli stresses, "the problem of how to introduce and where has been basically eliminated. Unfortunately, however, the problem of what to introduce still remains very urgent. It is a question of the extent to which scientists' studies are suitable for extensive application in production. As yet not everything is satisfactory in this matter. Being engaged in the strengthening of relations between science and production and in the development of the introduction system, we at the Transcaucasian Department of VASKhNIL have decided to see what can be taken from the studies of our institutes for practical application. It has turned out that there are many studies, which, according to reports, are considered completed. However, they do not have a sufficient substantiation, suffer from one-sidedness and solve only small matters, or only part of a problem.

I had occasion to see a similar kind of "study" on the same Goriyskoye Experimental Farm. As a technical innovation applied here I was shown a system of automated drop irrigation of an apple orchard. It is installed on 100 hectares, has a central control panel and can operate automatically. At first glance the innovation is impressive. Labor expenditures are lowered by 500 man-days. As compared with ordinary furrow irrigation water losses are reduced almost tenfold. However, this is only at first glance.

In fact, this system irrigates so efficiently that fruit trees chronically suffer from a moisture shortage. As the saying goes, they are now concerned "not with abundance, but with survival." The point is that irrigation pipes extended along planting rows (almost at a height of one-half meter from the soil surface) literally drop by drop moisten only a narrow strip of land not more than 6- to 8-cm wide. Moreover, not even all the water that drips from pipes reaches the soil. A great deal of it evaporates under the hot sun. All this, in fact, reduces the publicized efficiency of this innovation to naught. Apparently, the embarrassment, which, as I noted, Archil Petrovich Kacharava felt, when he showed us the effect of the new irrigation system in the orchard, was due to the above. Its lack of technical development was too obvious.

The fate of a truly advanced method of irrigation of orchards, as well as of other plantations, is determined by the above. Apparently, it is not accidental that, having this unsuccessful experiment in mind, some people began to say that drop irrigation did not prove its worth in orchards. In such an execution--yes. However, the creative thought of scientists is also capable of creating what is needed to irrigate both orchards and fields well and efficiently.

Taking into consideration the uncovered shortcomings, the preparation of agroengineering plans for the introduction of scientific and technical innovations, distinctive passports for completed research, is being introduced into practice at the Transcaucasian Department of VASKhNIL. They envisage

appropriate substantiations and characteristics necessary for the solution of the problem of the suitability or unsuitability of a scientific study for introduction into production.

As the experience accumulated in Georgia, as well as in the country's other republics and oblasts, indicates, scientific and technical studies--be it new machines, technologies, or new methods and forms of production organization--find application in production more rapidly if three basic conditions are observed. First, the innovation must be sufficiently ready for practical application, that is, brought up to a thoroughly substantiated plan (design, if it is a question of a machine). Second, it should ensure a significant increase in labor productivity in the sphere of its application and higher efficiency and simplicity in operation as compared with the applied analogs. Third, production should be capable of applying an innovation both in terms of the level of material and technical equipment and personnel training.

The experiment conducted in the Georgian SSR is remarkable not only in the fact that it shows convincingly the great opportunities for a progressive development of the socialist economy and increase in its efficiency uncovered as a result of the structural reorganization of the management system, its simplification and drawing of science closer to production, but also in the fact that it stimulates people to critically interpret the existing management practice and leads to the need to adopt design solutions on a larger scale.

Even here, in Georgia, many problems require a solution. The unification of three departments into one Committee for Agricultural Production has not fully solved the problem of integration. For now the committee manages the agrocomplex, not the agroindustrial complex as a whole. Many APK partners (processors, procurement officials and so forth) continue to work separately. They have their own plans, their own resources and special interest in the attainment of departmental, not common final, results. However, life and the needs of the developing economy require an expansion of the scale of integration. A situation, in which the Georgian Committee for Agricultural Production is subordinate to three Union departments simultaneously, can hardly be considered normal.

Many problems have not yet been fully solved at the RAPO level. Whereas in Georgia and Estonia the basic partners working on land have been also integrated within the framework of rayons, in other places even this does not exist yet. As the reality itself confirms, integration cannot be confined to this. The canning plant, or the tea factory, the meat combine and other enterprises located on the rayon's territory operate under the management of their departments. RAPO do not have real levers of management and an efficient economic mechanism. This is felt even more sharply in agroindustrial associations of other republics.

"If we are firmly convinced that there should be one manager on land and agroindustrial associations are fully responsible for the fulfillment of the Food Program, which, I believe, no one doubts," M. S. Gorbachev said at the April (1985) Plenum of the CPSU Central Committee, "then we must implement measures, which will make it possible to manage, plan and finance the agroindustrial complex as a single whole at all levels."

A positive solution of all these problems would be reflected in the most positive manner in the effectiveness of science, because it would unite its forces and better ensure the overall nature of studies and, consequently, their higher efficiency. Any, especially scientific, activity gives good results primarily where work is done with due regard for interacting factors, has an efficient goal-oriented direction and is oriented toward obtaining a specific economic or socioeconomic result. In many cases this does not exist yet. We must go further.

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## AGRO-ECONOMICS AND ORGANIZATION

## RAPO COUNCIL CHAIRMAN RECOMMENDS STRUCTURAL CHANGES

Moscow KADRY SELSKOGO KHOZYAYSTVA in Russian No 5, Sep-Oct 85 pp 30-35

[Article by V. Chishchenya, chairman of the council of the Slonimskiy RAPO in Grodno Oblast: "What Should Be Changed in the RAPO Structure"]

[Excerpts] The policy of a decisive transition to the intensification of agricultural activity prompts all of us to once again look attentively at production from the point of view of its potentials. Analyzing RAPO work, I have arrived at the deep conviction that it has great, by no means utilized, capabilities. During the years of the association's operation marked changes have occurred on kolkhozes and sovkhozes. The yield of agricultural crops and the productivity of animals have increased. All the farms in our rayon have now become profitable and there is no farm among them where the level of production profitability is below 26 percent. Plans for the production of grain, potatoes, flax, milk and meat were fulfilled during the past 4 years of the five-year plan. The planned assignments for the sale of all types of products to the state were also fulfilled. About 2,500 tons of grain, 5,000 tons of potatoes and more than 1,000 tons of flax fiber were sold in excess of what had been planned and, according to the results of 4 years and 6 months of the current year, 11,000 tons of milk and 830 tons of meat more than envisaged by the planned assignments were shipped to the state.

A comparatively short period passed, but the RAPO council with the all-around support of the party city committee and the executive committee of the rayon soviet of people's deputies succeeded in solving many such problems, which enabled kolkhozes and sovkhozes to speed up the planned transfer of production to an intensive path of development.

For example, the needs of farms are now more fully taken into consideration in the planned assignments of Selkhoztekhnika [Agricultural Equipment Association] and Selkhozkhimiya [Scientific Production Association for Agrochemical Services to Agriculture]. They are now prepared on the basis of the orders of kolkhozes and sovkhozes, of course, with due regard for the capabilities of partners. The Commission on Problems of the Agroindustrial Complex of the Presidium of the BSSR Council of Ministers approved the system of technical servicing of dairy farm equipment developed in our rayon. Its essence lies in the fact that accounts among partners are settled in accordance with annual limits of expenditures. This made it possible to

organize a regular operation of equipment and to complete the transition to the acceptance of milk directly on farms. The latter, in turn, contributed to a sharp rise in qualitative indicators. For example, in 1984 a total of 96 percent of the sold milk was accepted as first grade. Our kolkhozes and sovkhoses are now fully relieved of concerns connected with the delivery and transfer of milk, as well as livestock. Field products are also transported in a centralized manner. Last year 33 percent of the vegetables, 26.5 percent of the flax stock and about 50 percent of the grain were accepted locally and transported. The acceptance of products directly at places of production makes it possible to reduce losses, to utilize transport more efficiently and to manage the operation of processing enterprises more smoothly.

The RAPO council worked out efficient measures to strengthen contractual discipline between farms and service enterprises, established economically substantiated prices of the young cattle and hogs being sold and revised and lowered the rates of some types of services provided to farms by Selkhoztekhnika and Selkhozkhimiya.

The stocks of material and technical supply of kolkhozes and sovkhoses are also distributed collectively.

A favorable situation for a successful completion of the 11th Five-Year Plan and the attainment of higher, new goals in the growth of production and increase in its efficiency has now been created in the rayon. The increased mutual understanding among APK partners also contributes to this. However, practice has shown that relations among partners need to be improved and strengthened both organizationally and legally.

What in the RAPO management system should be improved?

While the uncoordinated departmental subordination is retained, the solution of any urgent problem requires a lot of agreements and often, even after all this, not an optimal solution is adopted. I fully agree with those who believe that Selkhoztekhnika and Selkhozkhimiya services, as well as construction and reclamation organizations, should be fully subordinated to agricultural bodies. The possibility of better utilizing the accumulated production potential and material and labor resources and of more cautiously planning the utilization of the allocated capital investments will appear. The destruction of departmental barriers would enable service enterprises to more rapidly give up the chase after the production volume, not calculate their services in rubles, make them cheaper and more qualitative and begin to truly think about how to more fully meet the needs of kolkhozes and sovkhoses--direct producers of agricultural products.

As is well known, in accordance with the standard statute the RAPO council has been given the right (with reservations) to redistribute capital investments among partners in the fourth quarter. However, urgent problems cannot be realistically solved in such a way. For example, a disproportion between milk production and the capacity of the milk plant has been created in our rayon. The dry skim milk plant built in 1964 has a planned capacity of 100 tons in 24 hours with two-shift operation. A total of 270 tons of milk are now obtained. In such a situation it is difficult or simply impossible for the plant to

attain qualitative characteristics of the produced products.

Or let us take the same roll technology of stock lifting. Farms are waiting impatiently for the time when the flax plant will be able to accept all stock in rolls. For the time being, however, it is permitted to process it in small volumes on an experimental basis, because there are no sheds for the storage of flax products.

If the RAPO council distributed the limits of contract construction work, or had some share of it at its disposal, it would find a certain part for the solution of its urgent problems. For the time being, however, the RAPO council can carry out the necessary construction only at the expense of kolkhoz limits. The entire remaining volume is distributed without any agreements with us.

In our opinion, the RAPO council should be also given more freedom in maneuvering stocks of equipment, fuels and lubricants. For the last 2 years in November-December the rayon's kolkhozes and sovkhoses have experienced a shortage of diesel fuel and have been forced to lay up part of the tractors. At the same time, it could be borrowed from some RAPO organizations without detriment to the matter. However, they do not give consent to this, being afraid that next year's stock will be reduced. The situation with gasoline is different. At times machines stand idle in a number of RAPO organizations and farms could come to their aid.

The need for the establishment of a service of interdepartmental control over the observance of all-Union state standards for the delivered technical facilities during the transfer of products, acceptance of mixed feed and so forth is felt ever more acutely at the rayon level. It seems to me advisable to have under rayon administrations of agriculture an intersectorial inspectorate for control over the quality of agricultural products and the observance of all-Union state standards for products delivered to kolkhozes and sovkhoses by other enterprises. Such an intersectorial inspectorate can be established, liquidating the rayon service of the Ministry of Procurement, which, in our opinion, does not prove its worth. Incidentally, at the present level of agricultural development the problem of equipping rural specialists with different instruments for a quick analysis also arises ever more sharply. All this is still done intuitively. Therefore, erroneous decisions have not been ruled out.

RAPO rights in the revision of rates of such services as machinery repair, equipment installation and so forth should be extended. The association council now has very limited rights in the solution of these problems.

Accounting relations between the farm and the State Bank must be improved. Often they have a groundless direction toward infringing upon kolkhoz and sovkhos interests. For example, according to the directives of the USSR State Bank dated 1 June 1980, in the event that a construction organization delays the date of commissioning of a facility, the State Bank department imposes a fine for the use of credit. But on whom? Not on the builder, but on the kolkhoz that took the credit.

It is necessary to increase the economic substantiation of planned assignments for the sale of products to the state. At present they are weakly connected with plans for material and technical supply and do not take the attained level of production into consideration.

More efficient decisions on increasing the interest of service and processing organizations in the final results of work on the fulfillment of the Food Program are necessary. In my opinion, the procedure, according to which engineering and technical personnel, as well as direct executors, will receive bonuses depending on the decision of the RAPO council, will be effective. In this case the responsibility of partners to kolkhozes and sovkhoses for a prompt and qualitative fulfillment of their obligations increases.

Kolkhoz and sovkhos specialists often express dissatisfaction with the existing system of price formation. Now this procedure in no way contributes to strengthening the interest of industrial enterprises delivering products to farms in improving their quality. They bear no responsibility for the economic consequences of their use. This, in turn, does not create interest on the part of industrial enterprises and their design bureaus in improving machines. For example, kolkhozes and sovkhoses refuse to purchase tractors of the T-150 type, not because they are unnecessary, but because they are expensive and unreliable in operation. The same can be said about the KSK-100 feed harvesting combine. Prices of mixed feed are not connected with quality. This creates a lack of responsibility for the assortment and quality of its production. The kolkhoz is forced to use not what it needs, but what it will get. Many such facts can be cited.

All service enterprises, when preparing a costing for any type of service, envisage a certain percent of planned accumulations (try to take a little more). I propose to make this indicator mobile and dependent on the promptness and quality of performed services and a reduction in their cost.

This system of economic incentives for planning construction organizations creates interest in an increase in the cost of planned projects. Is it not why we now build dairy farms with a technical and economic substantiation of plans for 3,500 to 4,000 kg of milk yield per cow and cattle fattening farms for 900 grams of a daily weight gain and more? As yet, however, it is by no means within the power of every farm to have such indicators and, therefore, the use of such plans leads to a decrease in the recovery of funds. For builders planned accumulations are also planned without taking into account what and how much agricultural production will receive.

I mentioned only some problems, whose solution will make it possible to increase the efficiency of RAPO activity. I would like to express all this at the threshold of the 27th party congress, where, undoubtedly, much attention will be paid to problems of improvement in the economic mechanism.

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## TILLING AND CROPPING TECHNOLOGY

### VASKhNIL OFFICIAL DISCUSSES INTENSIFIED CROPPING TECHNOLOGY

Moscow EKONOMICHESKAYA GAZETA in Russian No 38, Sep 85 p 15

[Interview with Nikolay Zakharovich Milashchenko, First Vice President of VASKhNIL (All-Union Academy of Agricultural Sciences imeni V. I. Lenin), under the rubric "Economy of the Agroindustrial Complex": "The Effectiveness of Intensive Technology"]

[Text] In his speech at the party-economic aktiv in the city of Tselinograd, M. S. Gorbachev gave special attention to the extensive introduction of intensive technology in farming and in other branches of agricultural production.

The editors have turned to Nikolay Zakharovich Milashchenko, First Vice President of VASKhNIL, with a request to answer a number of questions relating to the basic principles of the new technology and to problems of introducing it.

[Question] What are the characteristic features of intensive technologies and what are their advantages over regular agrotechnical methods for cultivating crops?

[Answer] In all cases, no matter what crop is being cultivated, farmers carry out soil cultivation, sowing and fertilizer application, implement a number of operations involving crop care and finally, perform harvesting operations. In contrast to this, intensive technologies require precise adherence to a system of measures which has been foreseen by scientific recommendations with the goal of achieving maximal yield of products per hectare under the given conditions.

Here every element functions within a complex--the use of highly productive varieties, the implementation of agrotechnical operations in the best time and with high quality, optimal fertilizer doses and effective methods for introducing these fertilizers, the utilization of effective means to combat weeds, pests and plant diseases and the timely harvesting of crops.

In other words, all of the factors which affect productivity must develop in a closely interrelated manner, which in the final analysis results in a sharp increase in production output and in a decrease in its cost price. Intensive



technology is characterized first and foremost by a strict sequence of all agrotechnical measures with a consideration of the crop, variety and soil. It also requires a specific complex of machines and equipment, efficient forms of labor organization and wages and standard indicators for the expenditure of resources and materials. New technologies will not tolerate any types of violations--otherwise they will not bring the desired changes.

[Question] For the cultivation of which crops are intensive technologies used most?

[Answer] The crops for which progressive technologies have been best developed include winter and spring wheat, winter rye, corn, sugar beets, sunflowers and potatoes. In recent years intensive technologies have been making inroads into vegetable production.

Intensive technologies have been most widespread in the grain industry, which is the foundation for all agricultural production. This year about 17 million hectares of wheat and almost all corn for grain were cultivated according to intensive technology. For the 1986 harvest it is planned to increase the area of grain crops utilizing new technology to over 31 million hectares, including corn, which will occupy almost 4 million hectares. In coming years, as noted at a meeting of the party-economic aktiv in Tselinograd, it will be possible to utilize such technologies on an area of no fewer than 60 million hectares. As a priority task we must employ intensive technology to cultivate crops on reclaimed lands.

Intensive technologies are being widely introduced for raising sugar beets, sunflowers and soybeans. Millet, rice and a number of other crops are being cultivated according to the new agrotechnology on considerable areas.

Intensive technologies are being developed both as integral parts of the zonal farming system, thereby achieving a planned productivity of arable land on the basis of the efficient use of natural factors and allocated material-technical resources. Farming systems for various zones in the country have been developed over the course of many years and they are now in operation. Considerable experience has been amassed in introducing all of a system's links (methods of protecting soil from erosion, crop rotations, systems of soil cultivation and sowing schedules).

The most important indicator characterizing zonal farming and technology is the nature of the cycle of nutritional elements in plants, i. e. the relationship of nitrogen, phosphorus and potassium removed from the soil to their return to the soil by means of microbiological processes during the breakdown of organic substances (manure and plant remains), legume crops and mineral fertilizers.

Here it should always be remembered that the degree to which soil-climatic resources and fertilizers are used is determined by numerous factors which should be optimized without fail. This includes crop rotation, variety, seed, sowing period and sowing rate, methods of fertilizer application, the struggle against weeds, pests and diseases, the liming of soil and so forth.

Intensive technologies for cultivating grains and other crops foresee the achievement of the overall concentration of fertilizers, reclamation agents, pesticides, growth regulators, new technical agents and other production resources on land with the best agrotechnical qualities, which will result in the greatest return on high-quality seed. Thus, the return on fertilizer must be increased on the average to 7 kilograms of grain per kilogram of fertilizer (in active substance) within a complex with pesticides and other chemical agents.

[Question] What is the effectiveness of utilizing intensive technologies and how is it achieved in practical terms?

[Answer] As we have already noted, a high level of effectiveness of intensive technology and of return on allocated resources can be achieved only on the basis of an assimilated zonal farming system, signifying an optimal solution to questions related to the use of local soil-climatic conditions. For example, the presence of erosion processes in fields sharply decreases the return on fertilizers and other agents.

How do individual technological factors affect the productivity of, for example, grain crops? Practical experience shows that, all else being equal, the productivity of grain crops increases by about 35-50 percent as a result of new varieties, by 30-35 percent as a result of fertilizers and by 25-30 percent as a result of pesticides and retardants. For this reason, the selection of varieties and hybrids is of paramount importance. Breeders are faced with the task of raising the winter-hardiness and resistance to disease and pests of winter crops, and in zones with insufficient moisture supplies--of developing varieties with an elevated level of drought resistance. Great demands are also being placed on the varieties of all other crops.

Further, fields allocated for intensive technology must be treated with lime or gypsum without fail if these measures are required. Fertilizers must be applied in strict accordance with scientifically-based norms for achieving the planned return. Phosphorus fertilizers are applied only locally (as the basic or starting fertilizer). With this application method the use coefficient for fertilizers increases by 25-30 percent.

Fertilizer doses are determined according to zone, soil fertility and the reserve of nutritional elements in the soil. Whereas in the steppe regions of Siberia and Northern Kazakhstan, where there is only 300-350 millimeters of precipitation annually, the maximal fertilizer dose per hectare equals 60-80 kilograms of active substance to produce 18-25 quintals of grain per hectare; in the moist zones of the European section of the USSR these doses increase to 300-350 kilograms with the goal of producing 45-50 quintals of grain per hectare. Fertilizers must be utilized within a complex with retardants and pesticides.

Data from scientific organizations and leading enterprises speaks of the effectiveness of the entire complex of intensive technologies. I would like to present some indicators on the effectiveness of intensive technology in cultivating winter wheat in Panfil'skaya Experimental Station of UkrNII Za

[Ukrainian Scientific Research Institute of the Grain Industry] during 1985 (Kiev Oblast).

Indicator	Intensive Technology	Regular Technology
Sowing area, hectares	420	30
Productivity, quintals per hectare	47.7	34.9
Total expenditures per hectare, rubles	226.4	175.2
Cost price of 1 quintal, rubles	4.40	4.65
Gluten content, percent	26.6-30.4	20.2
Procurement price, rubles/quintal	15.00	12.90
Supplement for quality, rubles/quintal	1.50	--
Profits per hectare, rubles	577.2	287.9
Profitability, in percent	275.0	177.4

Data can be presented on the productivity of grains with intensive and regular technology in various regions. Thus, in Sovetskiy Rayon of Stavropol Kray on an area of 27,000 hectares where progressive methods of cultivation were employed 30.2 quintals of winter wheat were produced per hectare even under dry conditions, and on an area of 56,400 hectares where regular agrotechnology was employed--only 17.5 quintals. In Millerovskiy Rayon of Rostov Oblast on an area of 7,000 hectares where intensive technology was utilized 30.7 quintals of winter wheat were harvested per hectare, and on an area of 36,000 hectares where regular technology was employed--only 18.7 quintals.

[Question] What is hindering the accelerated introduction of intensive technologies for cultivating various crops in kolkhoz and sovkhos production?

[Answer] For many crops intensive technologies have been developed and approved in various zones. But this does not mean that they can already be introduced in every enterprise and on every field. First and foremost we must make full use of natural potential, i. e. we must deal with questions such as the struggle against soil erosion and we must assimilate all elements of the zonal farming system. Without this, intensive technologies will not yield the desired effect.

Further, a firm material-technical foundation must be built for intensive technology. In other words, we must have the essential selection of machines and equipment that will enable us to carry out agrotechnical measures in optimal time as well as adequate quantities of fertilizer, herbicides and other chemical agents to combat weeds, pests and plant diseases. Unfortunately, all of these agents are still in short supply.

Also of great importance is the training of cadres and the preparation of directors and specialists of enterprises, especially brigade leaders of field brigades and machine operators as well as the implementation of a complicated complex of work foreseen by intensive technologies. As the examinations of VASKhNIL scientists and specialists of agricultural organs show, serious violations of technology were tolerated at the local level this year with

regard to, for example, the cultivation of winter crops. The sowing schedule, the optimal ratio between nutritional elements and the schedule for applying fertilizers were not adhered to. Protective measures against diseases, pests and weeds were either not carried out or carried out too late. Seed quality did not always correspond to standard requirements. In the TsChO [Central Chernozem Zone] and Nonchernozem Zone of the RSFSR, for example, regionalized varieties of winter wheat turned out to be inappropriate for intensive technologies due to extensive lodging and infection with diseases.

The incomplete supply of enterprises with technical means, especially for the local application of fertilizer and for the use of pesticides, had a negative effect on productivity. In a number of cases even with the availability of a technological track the struggle against diseases and pests had to be carried out with the help of aviation and reequipped land vehicles. All of this speaks of the fact that for the overall introduction of intensive technologies it is essential to carry out serious preparatory work, to create the conditions for achieving the complete manifestation of all the advantages of these technologies and on this basis to achieve large harvests of grains and other crops.

Here special attention should be paid to the introduction of progressive forms of organization and material stimulation of labor in subdivisions that employ intensive technologies to raise grains, feed crops, and industrial and other crops.

It is the task of all participants in the country's agroindustrial complex to accelerate the development of the necessary conditions for the universal transition of all branches of agriculture to an industrial base.

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## FORESTRY AND TIMBER

### PARTY AKTIV ANALYZES DEFICIENCIES IN TECHNICAL PROGRESS

Moscow LESNAYA PROMYSHLENNOST in Russian 1 Aug 85 p 3

[Article by V. Alekseyev: "Reorganization Rather than Expansion: From a Party Aktiv Meeting of the USSR Ministry of Timber, Pulp and Paper and Wood Processing"]

[Text] THE TASKS FACING THE COMMUNISTS IN THE APPARATUS OF THE USSR MINISTRY OF TIMBER, PULP AND PAPER AND WOOD PROCESSING [MINLESBUMPROM] - STEMMING FROM THE DIRECTIVES OF A CPSU CENTRAL COMMITTEE SESSION ON QUESTIONS CONCERNING THE ACCELERATION OF SCIENTIFIC-TECHNICAL PROGRESS - WERE DISCUSSED AT A MEETING OF THE MINISTRY'S PARTY AKTIV WHICH TOOK PLACE ON 29 JULY.

In Party Committee Secretary V.A. Ovchinnikov's speech, and in statements during the discussions, it was said that the communists and all of the workers in the apparatus of the ministry approve of and support the assignments advanced by the April 1985 CPSU Central Committee Plenum and by the Central Committee's session of 11-12 July, and also approve of and support the scientifically-sound concept of the acceleration of the country's social-economic development and of qualitative reforms based on the introduction of scientific and technological advances and the improvement of management and the economic machinery.

Today, all cadres must clearly understand the vital necessity of the immediate adaptation by each management team and enterprise to the new methods of management, and to the introduction of progressive technological processes, machinery, equipment, materials, and progressive methods. The level of economic management of a branch, and the level of competence of those who are entrusted to manage that branch, should be judged by the rate of progress and by actual results. Every worker in the ministry's central apparatus (and the more so if he is a manager) is undergoing an examination of his capability to keep up with the times, which is the most important criterion of his business and political qualities.

The meeting analyzed the unfavorable state of affairs in the branch and disclosed shortcomings in the work of accelerating scientific-technological progress. It was pointed out that the ministry apparatus still does not manifest the necessary persistence in the implementation of a unified scientific-technological policy. Reorganization is progressing extremely slowly. The branch continues to lag behind at decisive points.



In many associations and on enterprises there is a very low responsibility for the technical level of production and the quality of the products issued, as well as for increasing the products' competitive capabilities. The level of mechanization is low, consequently the productivity of labor is not growing. Approximately 40 percent of the workers are engaged in manual labor. The schedules for implementation are disrupted, as are the utilization of new capabilities. The potential of the branch's scientific research, planning and design, and technological organizations is being poorly utilized, as is the potential of the higher educational institutions. Schedules for the development, mastering, and introduction of innovations are unjustifiably being dragged out.

In connection with this, the managers of the technical administration, of the production administrations of logging, pulp and paper, wood chemistry, saw timber and wood processing industry, of the wallboard and plywood industry, of the timber rafting administration, and of the other subdivisions of the ministry, and deputy ministers Comrades Medvedev, Nikolskiy, Sentyushkin, and Ventslavskiy were subjected to sharp criticism.

However, based on the statements of Comrade Solomonov, head of the technical administration, and Comrade Borisovets, head of the timber rafting administration, it was impossible to understand how they intend to reorganize themselves. Their self appraisal was confined to the acknowledgment of shortcomings. Surely, the easiest thing in the world to do is to read a previously-prepared speech in which you endeavor to overemphasize your successes. It is much more difficult to deliver a self-critical analysis of the negligence in your work and to deal with criticism in a businesslike manner in your speech. It is self-evident that what is needed currently is a disposition towards concrete decisions and not towards superfluous explanations.

Straightforward talk then went on about the serious defects in the style of management of the branch's headquarters. A number of the organization's teams are running in place and drowning in paper work. A lot of time is wasted on meetings and conferences. Many types of plans for action, orders, and recommendations are brought about, but real organizational work for their realization is not carried out. Business trips to places by specialists of the ministry are extremely unprofitable, and their trips abroad are ineffective.

Minister M.I. Busygin focused the attention of the meeting's participants on the branch's pressing problems. The situation demands, emphasized the speakers, that communists and all the teams in the ministry apparatus not expand the present situation, but fundamentally reorganize and more clearly see their tasks in accelerating scientific technological progress and maintaining efficiency, organization, and order in all endeavors. It is necessary to decisively end the habits of pretentiousness, formalism, lethargy, and reconciliation towards shortcomings, and to constantly and persistently increase the personal responsibility of cadres for the assigned matter.

The speakers turned attention to miscalculations in planning, as well as in material and technical supply, and to the necessity of a fundamental change in investment policy. Presently, it is expedient to turn enterprises towards a technical re-equipping and towards a reconstruction of not less than 50 percent of facilities, since the return from capital investments in reconstruction are approximately twice as high as in new construction.

The following idea was accented: managers of the branch headquarters, main administrations, functional administrations, and departments must occupy a more active position in matters concerning the acceleration of scientific and technical progress and take responsibility more courageously.

Due to the increased demands, there must also be a different approach to political work. The communists have suggested that the ministry's Party Committee operate in a more energetic fashion, that it be more involved in the education of cadres, that it be more strict in making the responsible workers answer for the failure to carry out party decisions and for the pure and upright attitude of the party member, that it concentrate efforts on a fuller utilization of its right of monitoring the activities of the apparatus, and that it regularly listen to the reports of communists concerning their fulfillment of the duties prescribed.

The meeting of the party aktiv directed communists in the ministry's ranks to eliminate the negligence brought to light. The most important direction in the party organization's practical activity must be the mobilization of the workers to search out and put into action reserves for a significant increase in the output of timber-paper products, an improvement in their quality, an increase in labor productivity and production effectiveness, and an increase in conservation of raw materials in every possible way.

It is especially significant now--when there are only a few months left before the 27th CPSU Congress and when within the party preparation for campaigns for the position of delegate to the congress have begun--to obtain the successful fulfillment of the year's tasks and of the 5-year plan as a whole and, moreover, to bring about the creation in every collective of an atmosphere of high labor efforts and an aspiration to reach new limits without all sorts of corrections in the plan. For the ministry's party organization and for management cadres, this is a test of their capacity to conduct a decisive offensive against indifference and passivity, complacency, and irresponsibility. It is necessary to correct the unsatisfactory results of the branch's work in the first half of the year and to attempt to make up for earlier shortfalls in the plan, to more strongly develop socialist competition in labor collectives, and to strictly monitor the enterprises' preparations for winter. The party committee is also required to assist the headquarter's managerial workers in mastering the contemporary methods of managing the economy and the processes for its intensification.

I.P. Dyatlov, deputy chief of the CPSU Central Committee's Department of Construction, participated in and spoke at the meeting.

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## FORESTRY AND TIMBER

## BUSYGIN ON MAJOR PROBLEMS FACING TIMBER INDUSTRY

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 Sep 85 p 2

[Article by M. Busygin, USSR minister of the timber, pulp and paper and wood processing industry: "Potentials of the Timber Complex"]

[Text] Our country is the greatest timber power. It accounts for one-third of all the timber stocks on earth and, what is especially important, for more than one-half of the world stocks of the most industrially valuable trees of coniferous species.

Having big resources at its disposal, nevertheless the country's national economy experiences difficulties in its provision with timber materials. We are to blame for this. In the last few years many of the sector's enterprises have not fulfilled the plan for a number of major indicators. Attention to the development of the sector's basic shop--the timber procurement industry--has slackened. As a result, a substantial quantity of timber has been underdelivered as compared to the plan.

The staff of the timber industry is seriously worried about the existing situation. In order to ensure a decisive turn to an intensive development of enterprises of the timber complex, we are reexamining all the aspects of economic activity. We are paying principal attention to people and to improving their working and living conditions. The center of gravity of all economic work has been shifted to the retooling of enterprises, the maximum possible saving of resources and improvement in the quality of products.

A great deal will have to be done. Many of the sector's enterprises have not yet attained the planned level in the growth of labor productivity and overall timber procurement output. The profitability of production of basic types of products is declining. The replacement of fixed production capacities is extremely slow, as a result of which production becomes inexorably obsolete. Naturally, under these conditions the repair sphere has grown excessively.

Fulfilling the decisions of the April (1985) Plenum of the CPSU Central Committee, we have decided to halt nine above-limit construction projects and to increase the growth of capacities through the reconstruction and retooling of existing enterprises. The sector has specific experience in this respect. For example, in the last 15 years the growth of capacities for the output of

wood particle boards totaled 2.7 million cubic meters, which was equal to 40 percent of the total capacity of board plants. Please note, without an increase in capacities and the size of personnel. The establishment of such production facilities through new construction would require about 500 million rubles. However, we have spent one-fourth of this amount. This experience must now be transferred to all other subsectors.

The policy of intensification and increase in the efficiency of management presupposes, as an important component, an overall utilization of raw wood materials. We have vast potentials here. Only a small part of these is utilized now. For example, measures are taken to sharply increase the production of industrial chips for the pulp and paper industry from timber waste and low-quality timber. The press has widely illuminated the practical experience of Yugmebel, Tsentromebel and Kiyevdrev associations in the utilization of secondary waste approved by the CPSU Central Committee. I would like to recall that from the beginning of the five-year plan with minimal labor and financial expenditures more than 1.5 million cubic meters of raw wood materials have been additionally drawn into processing here. This has made it possible to save 2 million cubic meters of commercial timber, to free more than 25,000 railroad cars for the transportation of other national economic goods and to obtain an economic effect of several tens of millions of rubles.

Enterprises of the Prikarpatles Association, of the Ministry of the Timber and Wood Processing Industry, of Karelian and Komi autonomous republics and of Arkhangelsk and other oblasts make a worthy contribution to the cause of an efficient utilization of all resources.

We also attach special significance to a reduction in the mass intensiveness of output. First of all, this applies to the production of initial structural materials--wood particle boards, plywood and articles of the container industry. Today, for example, about 10 million cubic meters of raw materials are annually consumed for container production alone. However, the shortage of containers is growing constantly in connection with the marked increase in the needs of the agroindustrial complex. It is no secret that to this day containers are made from a 9- or 10-mm board, although cardboard and slice or rotary-cut veneer sheet are fully suitable for this.

Enterprises of many ministries and departments saw container boards. However, we ourselves, of course, must show an example of reorganization in container production. Measures for a sharp increase in the output of light-weight packaging materials are envisaged in the sector.

The pulp and paper industry shows a good example of a reduction in the mass intensiveness of output. Its reorganization for the output of "light-weight" paper and cardboard made it possible to lower the mass of a square meter of printed types of paper by 6 to 9 percent and of cardboard, by 2.2 percent at the beginning of the five-year plan, which enabled us to save about 5 million cubic meters of timber, 85,000 tons of chemicals, more than 4.7 million gigacalories of heat and 1 billion kwh of electric power.

A decrease in the share of heavy manual labor is one of the central problems.



Is it possible to call a situation, in which up to half a million people, including about 200,000 women, are engaged in manual labor at the ministry's enterprises, tolerable? Engineers, designers and scientists stand heavily in their debt. About 1,200 doctors and candidates of sciences are employed in the sphere of sectorial science. However, their output does not meet the demands of the time and the tenets of the conference at the CPSU Central Committee on problems of acceleration of scientific and technical progress. Moreover, there are frequent cases when sectorial science issues unwarranted recommendations and commits errors. For this reason the construction of all-season motor roads and, especially, their operation is carried out in an unsatisfactory manner from the technical point of view, the development of narrow-gage transport has completely reached an impasse and timber-raftering machine building in the sector is essentially in disorder.

The timber procurement industry is our basic subsector. The successful activity of all other enterprises of the timber complex largely depends on its stable operation. This is a heavy production section connected with the need to move a large amount of freight. A trunk of a 100-year old tree cannot be removed with bare hands. It is quite clear that equipment decides everything here. To tell the truth, there is quite a lot of it in forests. But how does it operate? Here are facts. LP-19 tree felling and stacking machines are used only 50 percent. On the average, the annual output per machine totals 27,000 cubic meters, which is much less than the norm.

At the same time, the brigade of Pavel Vasilyevich Popov, Hero of Socialist Labor, winner of the USSR State Prize, from the Tyumenlesprom Association procures about 300,000 cubic meters of timber, which is almost five times higher than the norm, with two LP-19 machines. This collective set the highest goals for itself: To procure 275,000 cubic meters of timber this year and to give almost 10 annual norms during the five-year plan! The results of work of P. Popov's brigade are equal to the capacity of an average timber procurement establishment.

We also have our "beacons" at other sections of the timber conveyer. For example, P. Kozyrev, operator of the LP-17 tree felling and logging machine, from the Medvezhyegorsk Timber Procurement Establishment of the Karellesprom Association, having worked 220 machine-shifts, last year procured 14,500 cubic meters of timber and S. Dmitriyev, operator of a knot sawing machine, from the Mitinskiy Vologdalesprom Timber Procurement Establishment removed knots from 58,000 cubic meters of timber in 286 machine-shifts. To disseminate the experience of these timber heroes everywhere--this is the task now.

Not long ago the ministry board and the presidium of the central committee of the sectorial trade-union examined the problem of disseminating the remarkable achievement of Arkhangelsk timber sawyers. The frame flow of the Solombalskiy Saw Milling and Wood Processing Combine headed by V. Rezanov sawed 570 cubic meters of timber in a shift, fulfilling the output norm 224 percent.

This achievement evoked labor enthusiasm. In 2 days the frame flow of Ye. Kashevarov at the Combine imeni V. I. Lenin in Arkhangelsk sawed more than 620 cubic meters in a shift and in another few days at the same combine the frame flow headed by A. Kolodin sawed about 672 cubic meters of raw materials with an excellent quality of output.



Advanced workers give an object lesson to all the sector's workers. We must not be content with average indicators, we must work efficiently as time demands--this is what their example teaches us. More and more labor collectives follow it today. As the results of July and August have shown, positive shifts are visible in the sector. The plan for the production of pulp, paper, cardboard and goods for cultural and general purposes, including furniture, and a number of other products has been fulfilled. Now it is necessary not only to consolidate the results attained, but to develop them further.

To properly complete 1985 and the five-year plan as a whole, to meet the 27th CPSU Congress with new labor achievements and to create a reserve for the sector's efficient work in the future--this is the point of our honor.

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## FORESTRY AND TIMBER

### BAIKAL TIMBER MANAGEMENT PROBLEMS, ECOLOGY OF REGION DISCUSSED

Moscow IZVESTIYA in Russian 20, 21 Sep 85

[Article by L. Filipchenko, forestry engineer "The Forest Around Baikal"]

[20 Sep 85, p 3]

[Text] The "health" of Baikal is determined by many factors, not the least of which is the forests.

#### 1. How it is Today

The importance of Baikal to us and how to save it were discussed at a recent session of the USSR Supreme Soviet. Let us thoroughly evaluate the present day situation at the world famous sea-lake.

Forests occupy 20.7 million hectares of the Baikal basin. This forms the lake's main catchment area. They are a powerful filter and a natural regulator of all runoff water entering Baikal. Finally, they are a reliable shield from the turbulent winds and sandstorms from the nearby Gobi Desert. This is why people have always been so careful about the Baikal forest.

The boat glided along the smooth surface of the bay. The engine was turned off and we, participants in the Baikal Expedition, waited for our boat to momentarily hit the sparkling marble bottom. This time stretched on and on. The reason was that the extremely clear water made the bottom seem deceptively near, even though it was several meters down.

We hit the shore. There was not the slightest sign of human actions in primeval nature, even though not far away, literally a kilometer and a half from Baikal, in a grey ravine, one could see a village of log houses. It touches upon the lightly forested taiga, running down from the spurs of the Pribaykalskiy Range. Just like Baikal, the stunningly clear water of the rivers comes from the depth of the forest kingdom. The steeper our path, the more talkative and mischievous is the river. Dozens of little creeks and streams wind into it and pour into its channel. We stop in a little glade and it seems as if we are in a deep, secret well. The glade is full of soporific mountain poppies -- these form its bottom, while its walls are magnificent

conifers. Overhead there are fragments of sky through the clouds. The taiga touches us with its beauty, power and confidence. Everything below us: Baikal itself, the abundant grasses in the meadows, the blue rivers, the circulatory vessels for the sacred lake, all these are its being and flesh.

Alas! Together with poetry, the prose of present day Baikal sits imperiously. Just a few kilometers from its banks one can see piles of excavated earth mixed up with pieces of reinforcement metal, piles of trees thrown helter-skelter, pools of waste oil. Somebody has decided to locate a diesel fuel storage facility just a few hundred meters from the water. A little farther away boiler pipes are smoking.

"There is nothing you can do." our colleague, a Moscow engineer, breaks the silence. "As they say, civilization, with all its features has its pluses and minuses."

What he said sounded so definite, not subject to doubt, let alone objections.

"It was the slogan of yesterday's managers. Unfortunately, it is still in effect and, what is dangerous, it hides many things." So concluded Grigoriy Ivanovich Galaziy, a well known scientist and correspondent member of the USSR Academy of Sciences.

The intensive industrial development of the middle and southern Baikal region has rapidly brought the forest into economic use. Timber was felled in violation of established norms and logging areas were densely concentrated. Sections several kilometers long fell under the axe. Loggers worked as primitively as possible: logging areas were designated without taking the localities' specific features and vulnerability into account. No, on the contrary, they took them into account, but only from their own narrowly departmental perspective: logging areas were opened in easily accessible areas, near villages and rivers. It is handier that way.

The forest industry's first business was to aim for pine; it is more suitable for lumber than are other species, and it even makes better cellulose. They allowed themselves two and three recuts. Even the pine forests in the forest steppe (Bichurskiy, Kyakhtinskiy, and Mukhorshibirskiy rayons in the Buryat ASSR) were cut and many slopes near Baikal stripped. Also, the sables' habitat suffered. Its natural boundaries are the Bolshaya Gusikha near Ust-Barguzina. Other species, larch, for example, which accounts for half of timber use, were not so eagerly sought (only 10-12 percent). There were references to difficulties in logging and transporting it. It is large and heavy, they said.

Several years ago an authoritative commission of scientists made a detailed study of the condition of forests in the Baikal region. Its conclusions were: loggers are operating in an impermissible manner. In its conclusion the commission named the areas especially subjected to intensive cutting: Barguzin, Kurumkan, Selenginskoye srednogoriye [foothills?], Turka, Goloustnoye...

I visited Goloustnoye. They were cutting down forests at full speed about 25-30 kilometers from Lake Baikal, what is more, this is near a river which is one of the main streams flowing into the lake. This river, which previously had a large flow, can now be waded across easily. The Bolshe-Rechenskiy lespromkhoz [logging operation], located near here, is master of the forest. It appears that this is with the agreement of its neighbor, a leskhoz [Forest service unit], which can see the lespromkhoz from its windows.

"What can be done", admitted a worker at the leskhoz. "If we need a tractor part, we run to the lespromkhoz, if we have to tighten a bolt or need gasoline, we also go there. What are our foresters doing? Also cutting trees."

I traveled hundreds of miles through the massive taiga and I did not once meet a man with green tabs and oak branches on his field jacket. The forest corps, officially called the Gosudarstvennaya Lesnaya Okhrana [Forest Protection Administration] is used for all sorts of economic work. Foresters are never engaged in their direct obligation -- supervision of forest resources.

The vital concern for Baikal leskhoz has fallen away. In addition to supervision of the taiga, they are obligated to replenish its resources when nature itself is not able to recover from the damage done to it. The large work volume can be handled only if there is high quality nursery stock, for which there is now a very acute need here. However, leskhoz are not rushing to provide themselves with nurseries. They are rushing to do something else. At leskhoz everywhere in the Baikal region wood processing facilities are being set up at a forced draft pace. Rolling pins, skis, decorative boards, all sorts of tolkushki [?], cutting boards, barrels and tubs. There are several hundred items in the assortment list "issued" by the RSFSR Ministry of the Forestry Industry. These goods can always be found on the shelves of khozmags [stores] in Siberia.

I asked N. Panasenka, chief of the Irkutsk Oblast Forestry Administration, if this expansion in economic activities was justified. I got the following answer:

"Mass consumption goods are a great help to lezkhoz. True, within rational limits. Each leskhoz can annually produce up to 60,000-70,000 rubles worth of mass consumption goods. This does not hinder its main, forestry operations.

The RSFSR Ministry of the Forestry Industry has its own opinion. It persistently recommends that leskhoz production capacity for mass consumption goods be modernized and new facilities built. Although its circulars strictly require that wood wastes be used as raw material, in fact, many completely good trees are so used. A loophole has been found: under the name of salvage [sanitarniy (ozdorovitelnyy)] cuttings, high grade material is selected. Without noticing it, foresters are becoming like the forest products industry.

To the nursery?

N. Polikarpov, chief of the Forest Regeneration Laboratory at the Institute for Forests and Wood, Siberian Department, USSR Academy of Sciences, explained to me how great is the erosion prevention role of forest cover in the Baikal basin and how weak is the soil under this cover. This is especially true for the northern Baikal region, where there is an extremely high level of seismic activity, steep slopes and thin soil cover. The taiga here restores itself only very slowly and with great difficulty. Mistakes made in forest utilization can quickly lead to sharp changes in hydrothermal conditions in the soil and can thus deprive the lake of water from this region.

However, even in the northern Baikal region we encounter the phenomena we mentioned earlier. It is the same grasp of forest industry workers and the same principle -- give us trees, even where grass would not grow.

The well known CPSU Central Committee and USSR Council of Ministers decrees (dated 21 January 1969 and 21 July 1977) on the protection of Lake Baikal give a special place to questions of forest conservation. The measures taken helped improve the Baikal taiga environment. New rules for timber felling in the basin were introduced, the loose floating of logs in rivers feeding the lake was forbidden and water protection zones were defined. Lespromkhozy had already planned to develop virgin, remote regions rich in timber. But suddenly they thought it over at Minlesbumprom and became frightened of the troubles. It was necessary to build roads into the remote regions and shift equipment and people there. So, loggers are still going to their old areas.

The operational introduction of industrial enterprises, especially pulp and paper mills directed the attention of scientific-research and control services mainly to the problems of waste waters containing highly toxic substances. However, there was an unexpected danger from above. Coniferous forests along the lake's southern shore began to dry up because of dust and gas emissions from the Baikal Pulp and Paper Combine.

R. Salayev, director of the Institute of Plant Physiology and Biochemistry, Siberian Department, USSR Academy of Sciences, explained: "There was nothing in this that our scientists did not expect. Knowing the pernicious effects of hydrogen sulfide and sulfur dioxide upon coniferous trees, we repeatedly warned the cellulose producers.... However, the initial design did not even make provisions for cleaning air emissions and for a long time the combine emitted abundant amounts of harmful wastes into the surrounding environment.

Academician A. Isayev, director of the Institute of Forests and Wood, Siberian Department, USSR Academy of Sciences, commented about this phenomenon: "The danger is extremely serious. Because of the features of the mountain relief and climate conditions in the Baikal basin, dust and gas emissions form stratified clouds and slowly settle down on the forest areas, having a toxic effect upon timber stands and soil cover."

When the discussion turns to material responsibility, Minlesbumprom tries, in every way possible, to get out of paying compensation and persistently denies the facts about its subordinate enterprises polluting the lake basin.



Moreover, through this ministry's efforts, the Institute of Toxicology has been set up on the Baikal Pulp and Paper Combine's territory. In contrast to the concerned conclusions of scientists, this institute tries in vain to prove the opposite, thus muddling the problem. This says something about the objectivity of industrial sector science.

In evaluating these facts, A. Slaugin, the combine's chief engineer, outdid even his most patriotic colleagues in the sector. Here is almost an exact quote from our conversation: "Don't believe what you hear. I will say even more. The substances from our stacks which settle on vegetation are the most suitable fertilizer for it..."

However, the categorical nature of his statements, although they are in anecdotal form, do not hide the truth, but only embellish the true state of the Baikal forest. There is much to do so that it will look different tomorrow. What? We will talk about that later.

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## 2. How Will it be Tomorrow?

In the cramped office of I. Semechkin, Director of the Institute of Forests and Wood, Siberian Department, USSR Academy of Sciences, leading scientific associates, who had given many years of their lives to the study of the lake basin, were meeting. Just what do these people propose? Conducting operations in the Baikal on an ecological basis.

The scientists have "broke down" the lake basin territory into "altitude-belt complexes" [VPK] forest types. In their turn, forests are classified as follows: subtaiga-forest steppe, mountain taiga (including broadleaved, cedar, cedar-fir), subalpine and podgoltsoviy [?]. Each complex has a strict definition of its role in the reproduction and preservation of Baikal's pure waters. For example, the broadleaved VPK produces 29 percent of total runoff in the basin, while the subtaiga-forest steppe only 7 percent. This latter complex assures the purity and preservation of the water passing through it and protects adjacent agricultural land from wind and water erosion. VPK also have differing hydrothermal characteristics (the sum of active temperatures, annual precipitation, annual precipitation, etc), soil capacity and vulnerability, and, of course, forest restoration processes. From this it follows that logging operations should differ. Forest use systems have been worked out for each VPK. Depending upon conditions in a complex, these systems contain various recommendations: where, what and how to cut, what technology to use in logging areas, what are the most effective measures to assist the natural renewal of forests. They all serve one goal, protection of natural conditions, and, therefore, of Baikal.

These scientists have been standing behind their ideas for more than 20 years. The Institute for Forests and Wood alone has sent several dozen expeditions to Baikal since it was transferred from Moscow to Krasnoyarsk, and

that was in 1959. They have been led by prominent scientists. Without exaggeration one can say that the work by the institute's collective is of the highest scientific level.

The lumberjacks listen and read, but continue to cut. This rephrase of a well known Krylov fable is the way to describe the current situation at Baikal.

One cannot say that "up on top" they do not listen to scientists' opinion. Back in 1973 an order of USSR Gosleskhoz [State Committee for Forestry] approved new Rules for cutting in the basin's forests. These clearly state: The present rules provide for work organization which would assure:

- a. Protect the complexes in the lake basin, increase the water storage, water regulation and soil protection capabilities of forests;
- b. Prevent water and wind erosion;
- c. Observe forest growth conditions necessary for regulating runoff..."

I will not give the large number of cases in my notebook which are evidence of scandalous violations of the Rules, if not of open ignorance of them. This was fully stated at the March 1985 session of the Buryat ASSR Supreme Soviet:

Trees were cut near the Baruna, Khalsana, and Eriya Rivers, causing the river to become shallower and almost 1,000 hectares of fields to be without irrigation.

Forests were removed from the watersheds of the Ubukuna, Vitima, Orongoya, Udi and Bryanki Rivers...

Wood is being floated on the Barguzin and Turka Rivers...

Because of forest removal in the republic, erosion now effects almost 1 million hectares of agricultural land. In recent years this has become especially noticable, as the dry steppe is held down by the forest. It is only very slowly restored here.

"And if you use your power?" I asked A. Bereshchinov, first deputy chairman of the Buryat ASSR Council of Ministers. His heart and soul hurting for nature around Baikal, Aleksandr Stepanovich only waved his hands: the plan for the Zabaykalles [Trans-Baikal Forest Products] Association] is corrected by the All-Union Ministry of the Timber, Pulp and Paper and Wood Processing Industry.

Although L. Shopkhoyev, general director of Zabaykalles, had finished his workday, the telephone was still ringing. They were "reporting the situation" from the lespromkhozy. From everything one could sense, it was of no comfort to the master of the office, who asked the directors to apply themselves a little more.

"I will not beat around the bush." Leonid Dmitriyevich told me, "It is complicated and difficult. Previously we had space and scale. That meant maneuverability and speed. Today the logging areas are only 5-6 hectares. The equipment cannot get around. In some places the loggers violate the rules. The plan makes this necessary.

Leonid Dmitriyevich spoke about his problems. How could one not understand him? The new Rules for cutting put new demands upon loggers. The different technology for logging (selective, step by step harvest) and a completely new attitude towards forests made it urgently necessary to restructure many production units and extensively introduce comprehensive mechanization. In answer to this, with enviable persistence the loggers used all sorts of pretexts to get around the new Rules for cutting. Even today, loggers allow a high concentration of logging operations in regions near Baikal and unauthorized recutting of logging areas for pine, leaving behind a mixed stand of mature broadleaved species.

Then it occurred to them: perhaps another change was needed, a psychological one. Everyone, from lumberjacks to the minister, should keep in mind that what people are trying to achieve in the Baikal forest is not for the sake of wood but of water. By improving forest conditions through salvage logging we thus preserve its purity and quality. This is the problem. One should not forget that water turnover in Baikal takes 400 years.

The plan proposed by the Institute of Forests and Wood is still a dream, but upon it rests the future of the Baikal forest and the lake itself.

However, something must be done today. What? This should be of equal concern to all who are participating in Baikal's fate. For it is today, as the situation indicates, that the question has been urgently posed: Will its water be adequate and pure? This requires a unified economic policy clearly oriented towards protecting the environment.

How then, can unified actions be taken when 324 enterprises from several dozen ministries and departments are cutting trees along the shores of the lake? Where do all these diligent woodcutters come from? Nobody is surprised that it is unusually easy for departments to obtain any logging area they desire, with practically no controls.

Problems of spreading out logging and developing new raw materials sources also urgently require solutions. However, this cannot be done without the introduction of progressive technology. In view of the Baikal basin's natural and geographic conditions and the vulnerability of its soils, high line cable units should be more widely used for logging. This is economically profitable and does not harm the environment. Incidentally, we have developed several types of such highly productive units, which are successfully "working" in mountain forests in the Caucasus and the Carpathians.

However, the most important problem in the Baikal forest is, of course, the organization of its proper use. There should be no bending or altering here. To cut or not to cut in the lake basin; this is not the way to pose the

question. "Cutting and regeneration are synonyms." So asserted G. Morozov, a gifted Russian scientist and forester, having in mind the expansion of forest resources.

How much can one now cut in the Baikal basin?

Leaders in the Buryat ASSR think that the Zabaykalles Association's annual plan must be reduced. At Minlesbumprom, on the other hand, they are inclined to increase it. Even some scientists take this strange position.

In 1982 the Siberian Division of the Nauka Publishing House published the book "Lesnoy kompleks Baykalskogo regiona" [Forest Complex of the Baikal Region]. Its authors, comrades Borzhonov, Puntskova and Tugutov question the new rules for cutting in the Baikal basin and call for the return to the old procedure of forest use. I cite just two passages from the book.

"As research, and observation and control over the implementation of the old provisions have shown, logging work under the old Rules did not have any particular ecological consequences."

"A number of provisions in the new Rules are not successful from an ecological perspective."

It must be confessed that there is no unity with regard to the Baikal problem even among the venerable "fathers of science" in the USSR Academy of Sciences itself.

What then does the country's main forest staff think?

This was not the first time I talked about the problems of the Baikal forest with A. Zverev, chairman of the USSR State Committee for Forestry.

Aleksey Ilich said, "The situation we are now encountering is very serious. It is the result of years of narrowly departmental practices. Top priority was given to particularly mercantile goals: take as much as possible and give nothing in return. Many sectors tried to realize their interests, without paying enough concern as to whether or not they were advantageous to the state. This applies to logging enterprises in Minlesbumprom. They leave so much wood behind at Baikal logging operations! If one views it over a 15-20 year perspective one could gather several million cubic meters. There are various reasons for this, but the main one is that small diameter trees, for which the sector has no use, are left behind at lower landings. Good intentions to use complete (waste free) processing still remain on paper. Incidentally, by using small diameter trees, forest industry workers could increase the production of mass consumption goods. This is because Minlesbumprom enterprises have high capacity processing facilities ready to run. We hope that USSR Gosplan will take our other interests into consideration. Specifically, leskhoz in the Baikal region need equipment. They still do not have enough vehicles, tractors, and equipment for fighting fires, which are a fearful enemy. There should also be thought about creating special light, powerful and flexible equipment for the Baikal forests.



The commission has become a constant visitor to the northern Baikal region. Prominent scientists and specialists from Moscow, Leningrad and Novosibirsk are solving problems in the location of industrial enterprises in the BAM [Baikal-Amur Mainline] zone. This is to be expected. Rich ores are concentrated in this area. It would be, at the least, wasteful, to let them lie buried. However, there is cause for concern: Against the background of the energetic rush for the region's wealth, the assurances to protect Baikal's flora and fauna seem timid and unconvincing. Sometimes, as experience in the construction of BAM itself show, they turn out to be promises thrown to the wind. Prior to starting work on the Buryat section, designers and builders said with one voice: "Baikal will not be harmed." Today, however, in disregard for themselves and for established norms, settlements are built without purification facilities, railroad embankments are as steep as worked out quarries, along railroad lines are gaping, barren, unforested sections, from which the taiga has been torn away to make room for various industrial sites. What can then be said about giant enterprises, where it was guaranteed that industrial emissions would not repeat the situation causing the forests in the southern Baikal region to die?

One must again, and always, keep in mind: the only technical plans with a right to life are those that, together with other equally objective solutions, include environmental protection tasks.

Without a forest there will be no Baikal. This is what Siberians have always said and what they are saying now. This truth calls for decisive and momentous actions.

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